PROGRESSIVE ARCHITECTURE
[PENCIL POINTS]

Published monthly by REINHOLD PUBLISHING CORPORATION, 330 West 42nd Street, New York 18, N.Y., U.S.A. Ralph W. Reinhold, Chairman of the Board; Philip H. Hubbard, President; H. Burton Lowe, Executive Vice President and Treasurer; Gilbert E. Cochran, Vice President and Secretary; Francis M. Turner, Vice President; William P. Winsor, Vice President. Executive and editorial offices: 330 West 42nd Street, New York 18, N. Y. Subscriptions payable in advance: 1 year, $4.00; 2 years, $6.00; 3 years, $8.00 in U. S. and Possessions, Canada and Pan American Union; $2.00 extra for each year in all other countries. Single copies, $1.00. Printed by Lotus Press Inc., 508 West 26th St., New York 1, N. Y. Reentered as second class matter, January 22, 1947, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Volume XXVIII, No. 11, Nov., 1947. Indexed in Art Index.

WE CAN'T STAND STILL

Hospitals and related health facilities occupy much of the attention of the design profession these days. For one thing, in volume of work on the boards and volume of anticipated construction, this type of structure ranks high, reflecting the urgent needs which must be met despite high building costs. Then, in three instances—the conduct of the V. A. hospital program, the A.H.A. "qualified architect" list, and the issuance of design and construction standards under the Hospital Survey and Construction Act—architects have been drawn into non-design, quasi-political, social considerations of hospital planning.

The principal interest of the designer, however, is still directed toward improved design of the structure. Here much remains to be done. We think that the buildings illustrated in this issue mark sharp progress—progress in study of the complicated program, in translation of that program into a plan, and in final design expression. Hospitals and health facilities in the United States are beginning to reflect the study which has resulted in an increasing literature on planning (our own PROGRESSIVE ARCHITECTURE LIBRARY volume by Isadore Rosenfield, for example), in the excellent standards of the U. S. Public Health Service, and in many national and regional seminars on hospital planning.

But standards cannot be substituted for design. In fact, standards can be dangerous; they can stultify design. If they are not to become limitations instead of suggestions, they must be *minimum* standards, prepared by progressive-minded researchers, subject to constant revision. (In all of these respects the "Appendix A" standards for the Hospital Survey and Construction Act qualify, incidentally.) More than that, they must be used only as a springboard by architects who aren't satisfied with stopping where we now are. Medical science is constantly moving forward; the design of health structures must move with it. Building techniques and knowledge of lighting and heating are progressing; their application to health structures must progress at the same pace.

We can't afford to sit back and be satisfied with our new hospitals; we can't afford to "freeze" design, even at a new high standard. Hospital designers can't rest; they must constantly study, *inquire, discuss*—and then go back to the drawing boards with new purpose. The hospitals we publish next year must show an advance over the ones in this issue, proud as we and the designers are of this group.

The Editors

Suggestions for using *Glass* in

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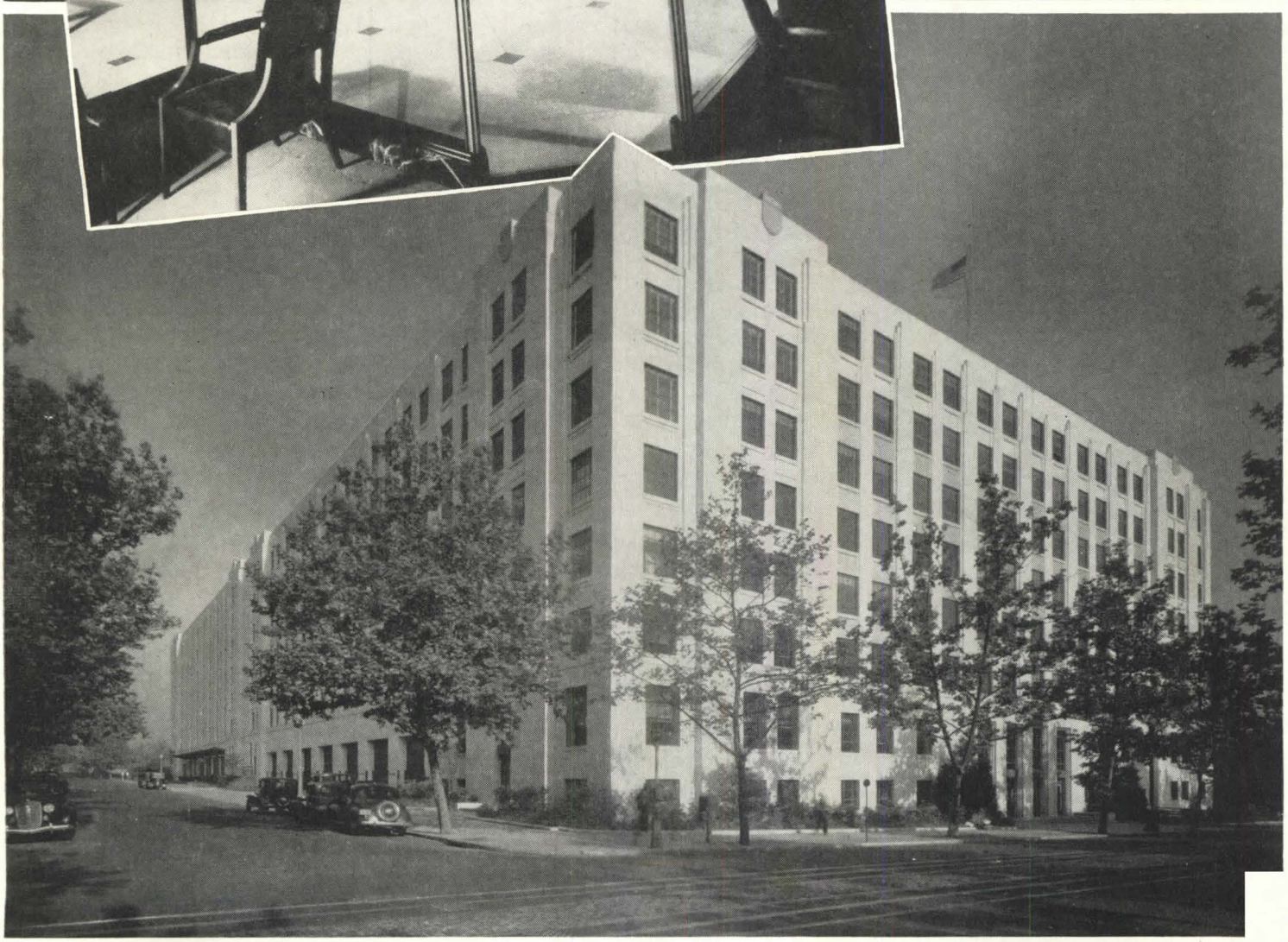

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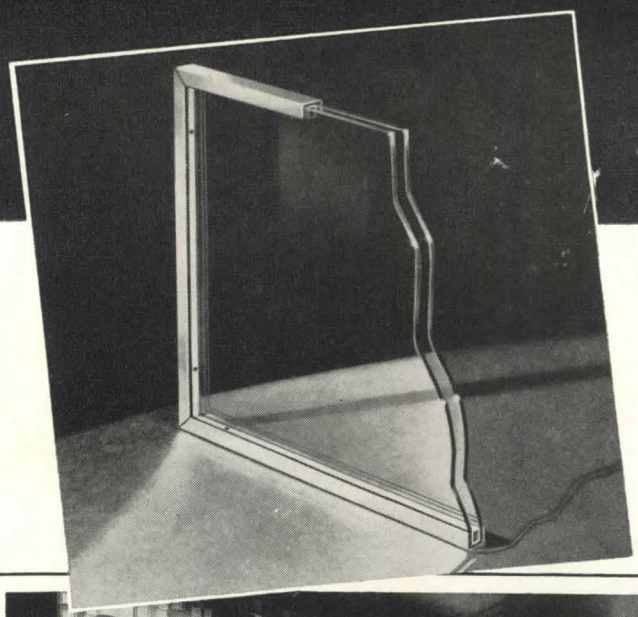

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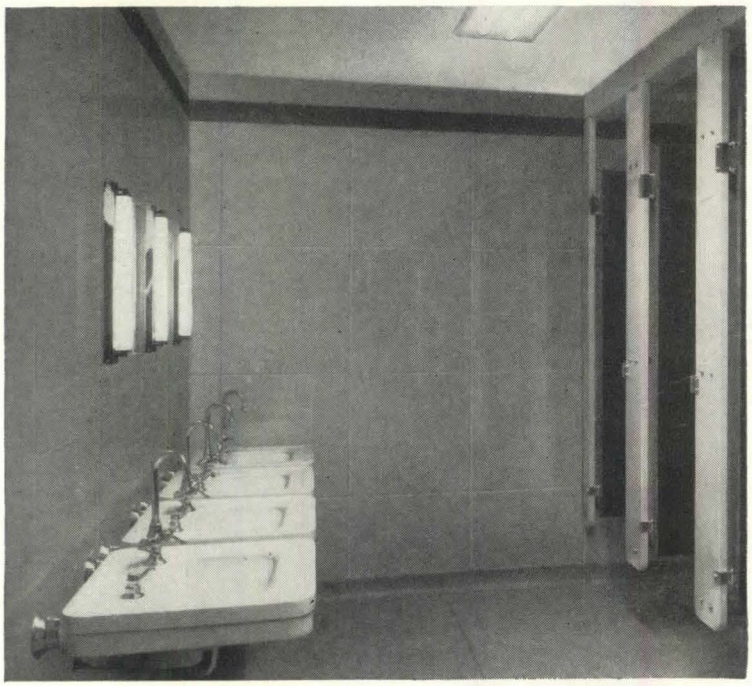

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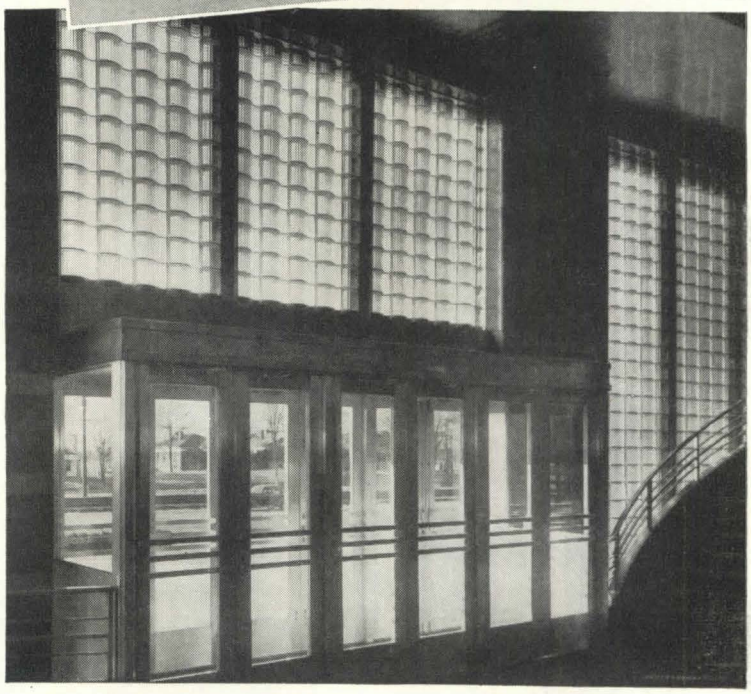

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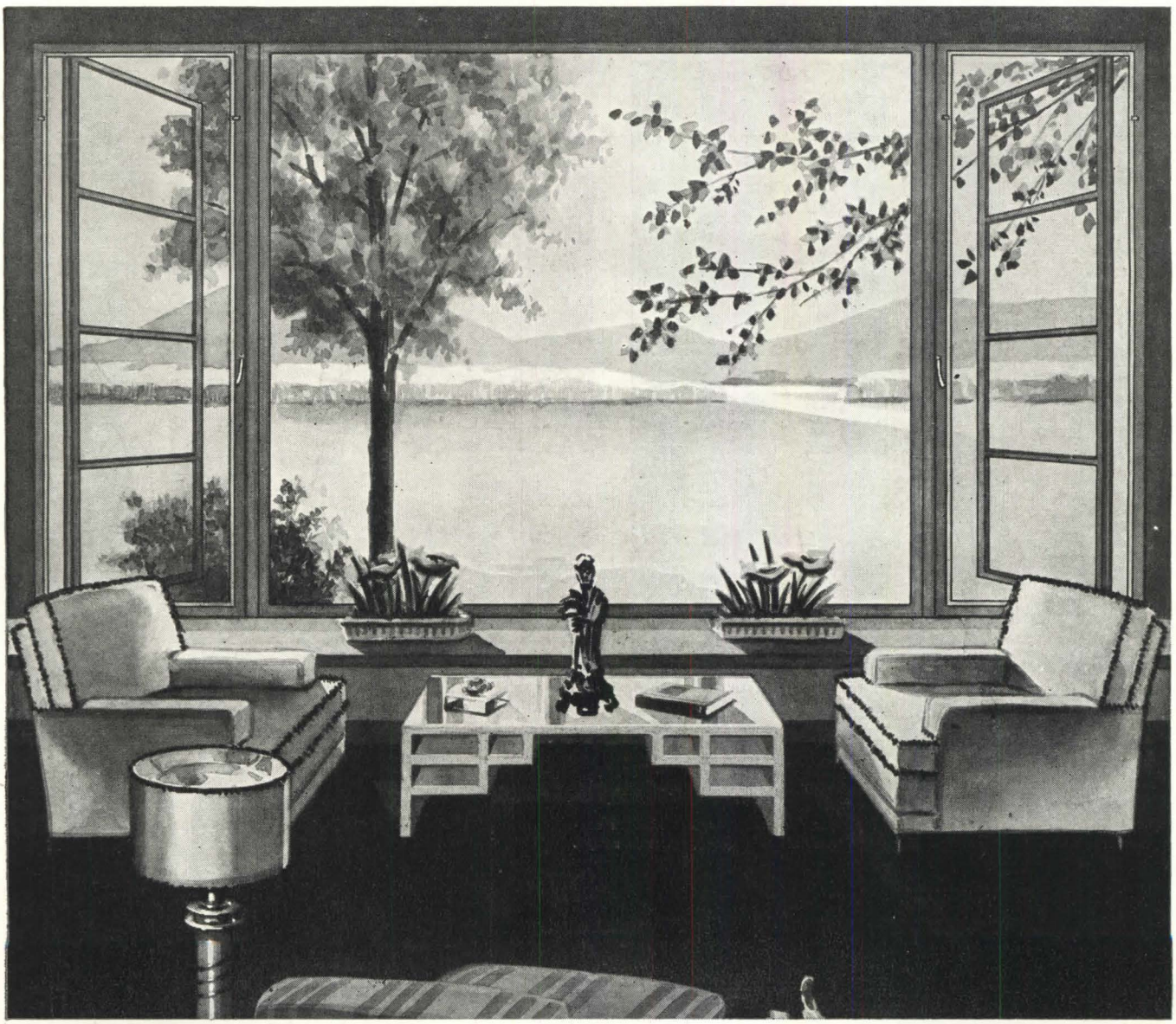

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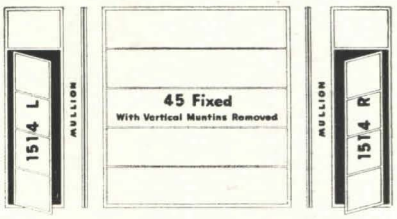
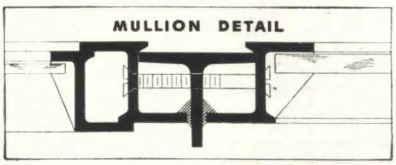


Remove vertical muntins from Ceco stock casement 45-Fixed. Combine windows with standard mullions.



Above is a detail drawing showing how the windows are combined by use of CECO Standard Mullions.

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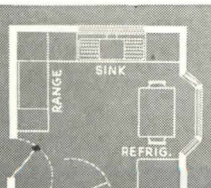

Approx. Size: 10′ 10″ x 10′ 9″

At left is the floor plan of the kitchen shown. Of course, the Crane Sunnycrest Sink fits smaller kitchens, too, as suggested in the two layouts on the right.

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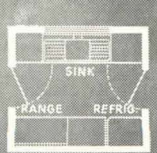

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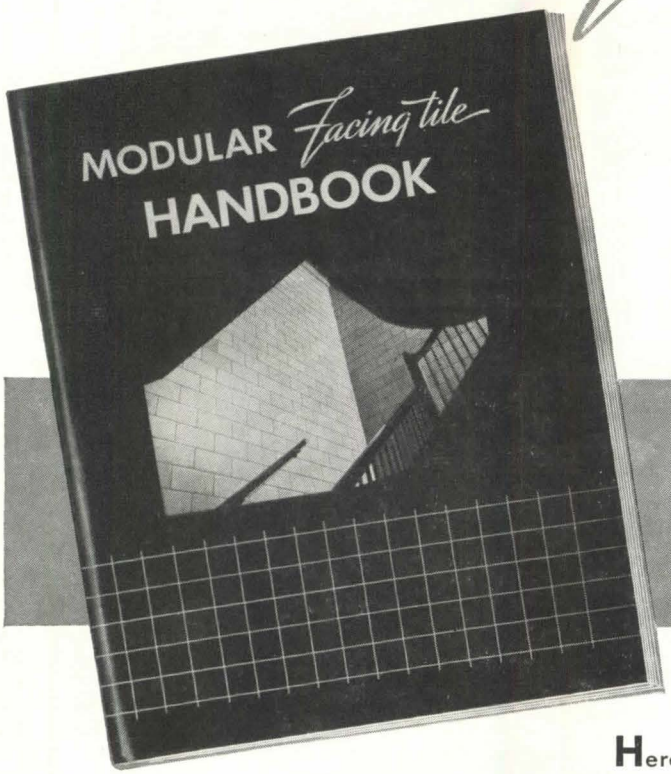

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VIEWS

NO POPGUN CRITIQUE!

Dear Editor: Reference is made to the September "Critique of 5 Homes."

Criticism is good if it gets down to fundamentals. My feeling is that you used a popgun when you should have employed something stronger. You apparently pussyfooted because as a host you could not be hard on your guests. This suggests that it might be better to leave the criticism to people who do not bear this kind of relationship to those whose work is being analyzed.

The purpose of criticism is to advance truth, and "popgun" criticism does justice neither to the profession as a whole nor to students in particular who are looking to the architectural press for guidance. It is my impression that in a good many schools of architecture today lip service is still being paid to function, but in their drafting rooms, students are not discouraged from concentrating intensely on the old "push-me-pull-you" game for the sake of making a "wow" of an impression.

By getting down to fundamentals the following might have been said:

The Brown house facing southwest has the worst possible exposure. It is placed in the middle of the plot so that it leaves only a ribbon of ground around it. This destroys the only flat spot on the lot and it produces an expensive cellar which has no light except through a few measly areas. If the architect had turned the house crosswise to the long axis of the island and had placed it tangent to the flat plateau, it would have faced south and an enormous, nature-made, outdoor living space would have been produced. Further, this would have definitely separated the approach and the service space from the private outdoor living space. The cellar would have been obtained with a minimum of excavation and it would have been beautifully daylighted.

The North Carolina house has no plot plan, which makes it impossible to give intelligent criticism; unless we consider the human dwelling place a mere geometric abstraction.

The Princeton house looks like a typical case of modern eclecticism where everything is pulled apart to produce an effect.

The San Francisco Bay house appears too good to be criticized, and the Quonset Cabin is damn good even if "the vertical wall" does "drop within the curve."

An easel painter has primarily the emotions to consider, but in buildings the esthetic function is only one of many which must be accounted for. The architect should not knock them around in his attempt to satisfy emotion. The trick is to satisfy emotion while in full consonance with the other functions a building must satisfy.

ISADORE ROSENFIELD
New York, N. Y.

PROS AND CONS

Dear Editor: The section on "A Critique of 5 Homes" in your September 1947 issue should get much praise. It is a splendid idea, very fairly and completely presented, and should be stimulating to both architects and prospective home builders. More of just such clear thinking and presentation of pros and cons in planning should produce better planned houses for the world to live in. Especially do I like the editorial introduction, setting forth such honest and sound principles of judgment of domestic architecture. I am looking forward to your *Homes*, Selected by the editors of PROGRESSIVE ARCHITECTURE.

ELIZABETH FITTON
Princeton, N. J.

WASTING OUR TALENT

Dear Editor: Last month we advertised in your magazine, as well as in *Architectural Record* and in *Interiors*, for designers, draftsmen, and engineers who have not learned too well how things were done yesterday; and offered good working conditions, Arizona sunshine, and interesting work as inducements. Up to date, we have received over 70 applications, coming from almost every state in the Union, from Canada, and from Cuba.

Knowing real well how difficult it is to find qualified assistants, this was surprising at first, but not after analyzing the letters of application as a group.

At least two-thirds of the applicants had the background and experience which would make them an asset in the best of offices. Only two men were not employed at the time of application. Several are now working in some of the best known offices.

Practically all letters indicated a sense of frustration, and only a few have shown determination and strong belief in new ideals, proved by their willingness to travel from remotest places to have an opportunity to express themselves, to work freely unhampered by traditions without overbearing masters, and had confidence in the future.

Taken as a whole these letters were very depressing. Not so much as a reflection upon the applicants as upon our society and economics. The country is wasting its talents and youth on mediocre projects promoted by free enterprise boys, while the word "planning" is shunned lest the "Committee" will hear about it.

Men of 40 with education and experience gouged out by years of depression and war are still hopeful of finding employment in offices doing modern work. Their search extending far from home indicates how slowly we are emerging from stagnation. Beyond the pages of our professional magazines there is a tremendous amount of bad work going on. There are signs all over that tradition is losing ground, but the worst of it is that its place is being taken by misunderstood and misused surface applications. We get so used to seeing the best in our magazines that it takes a good cross-country trip, or these applications, to realize that represents only a very small minority.

Despite the fact that we have not asked for any information or qualifications beyond imagination and fresh outlook, some of the applicants have given information as to their weight, height, color, and religion. After a war fighting fascism such an attitude is distressing. What bearing can such information have on architectural or industrial design? Gropius, Einstein, Mendelsohn, and others know the answer to this question. Women also have learned quickly of changing conditions—they apply for employment with doubt.

The cross-country lack of housing was very evident in most of the applications; however, there was some wishful thinking—hoping that there is still a city left in the U.S.A. with enough housing accommodations. In fact, some letters made us want to wire: "Can't offer any more work, housing very bad, but come out anyway—it's warmer here at least." All in all, the results of our advertisement are very satisfactory except for the fact that we cannot enlarge our staff to take in a least five more of the best of the crop, and it makes us wonder about this "shortage of good men" that everybody is crying about.

WILLIAM WILDE
Tucson, Ariz.

A REVIEWER CHIDED

Dear Editor: Pray consider me an enthusiastic backer of PROGRESSIVE ARCHITECTURE and all its good works. But one is occasionally at variance with a contributor's opinion—even irked to the point of rebuttal.

Surprisingly, my current annoyance stems from Mr. Henry L. Kamphoefner's "frank" review of Talbot Hamlin's *Architecture and Art for All Men*, (August 1947 PROGRESSIVE ARCHITECTURE). It might even be contended that "speaking frankly" is too kindly a capping for his rather unfriendly and non-objective language.

To my mind, students and laymen should find Hamlin's work a really helpful guide towards understanding architecture as an art. Nobody can gainsay his amiable treatment of contemporary architecture, which loses nothing for not being the pronouncement of a clique. Perhaps we have had an overplus of doctrinaire writing that has often failed

(Continued on page 10)

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VIEWS

(Continued from page 8)

to spread comprehension of our work, or even to have been good advertising.

Professor Hamlin has been a good "father" to many an architect of today and a sympathetic mentor of contemporary and progressive architecture. He should not be blamed for that. His recent book is indeed stimulating in its philosophy and does modern architecture, as a whole, more justice than writing of a biased cast. Hamlin has always seen the social value of modern building (as the late C. W. Behrendt did in his book), and he has never unwittingly paid critical compliments to unworthy examples or those meaningless extravagances of our contemporary "fellow travelers."

Hamlin's explanation of a "new humanism" is, for me, a very meritorious performance. Though the chapter on "Architecture and the Community" meets with the reviewer's approval, he seems not to observe that Mr. Hamlin's inspiring appeal does not savor of the "ivory tower," but shows the professor speaking his mind openly and with a feeling for social responsibility which is so often missing with the "practical" practitioner who is selling architecture designed with and without "emotion."

Maybe Talbot Hamlin is guilty of being more in love with Goodhue than we like, for one is never pleased when historians trace his work back to some strange ancestor. But in a book devoted to the enjoyment of architecture, all these developments have to be taken into account. Intolerance, fanaticism, and hysteria have no place in our search for good architecture. If we accept Bruno Taut's definition of architecture as the art of proportion (not only in a formal sense but also as an expression of all the civic activities, and in relation to climate and topography), then we realize that contemporary architecture should not be aloof from the suggestion that it, too, is descended from a monkey; no analogic restrictions should be permitted in an honest study.

Happily, almost every young architect has branched off the old highway of classicism and period imitation by now. Of course there is little homogeneous architecture, and nothing of the sort could be expected in this chaotic society.

It is so easy to call names and claim righteousness. Mr. Kamphoefner's review did not help to clarify matters or truly inform the prospective reader of *Architecture and Art for All Men*. Perhaps he should ask Talbot Hamlin for an invitation to board his cruiser for a pleasant hour, to talk things over.

In fine, to quote the editors of your excellent magazine, "It's time we all grew up and stopped being hysterical about this subject."

HEINRICH H. WAECHTER
Boston, Mass.

FUNCTION DOMINANT

Dear Editor: Why the title "Logic? . . . Or Esthetics?"?

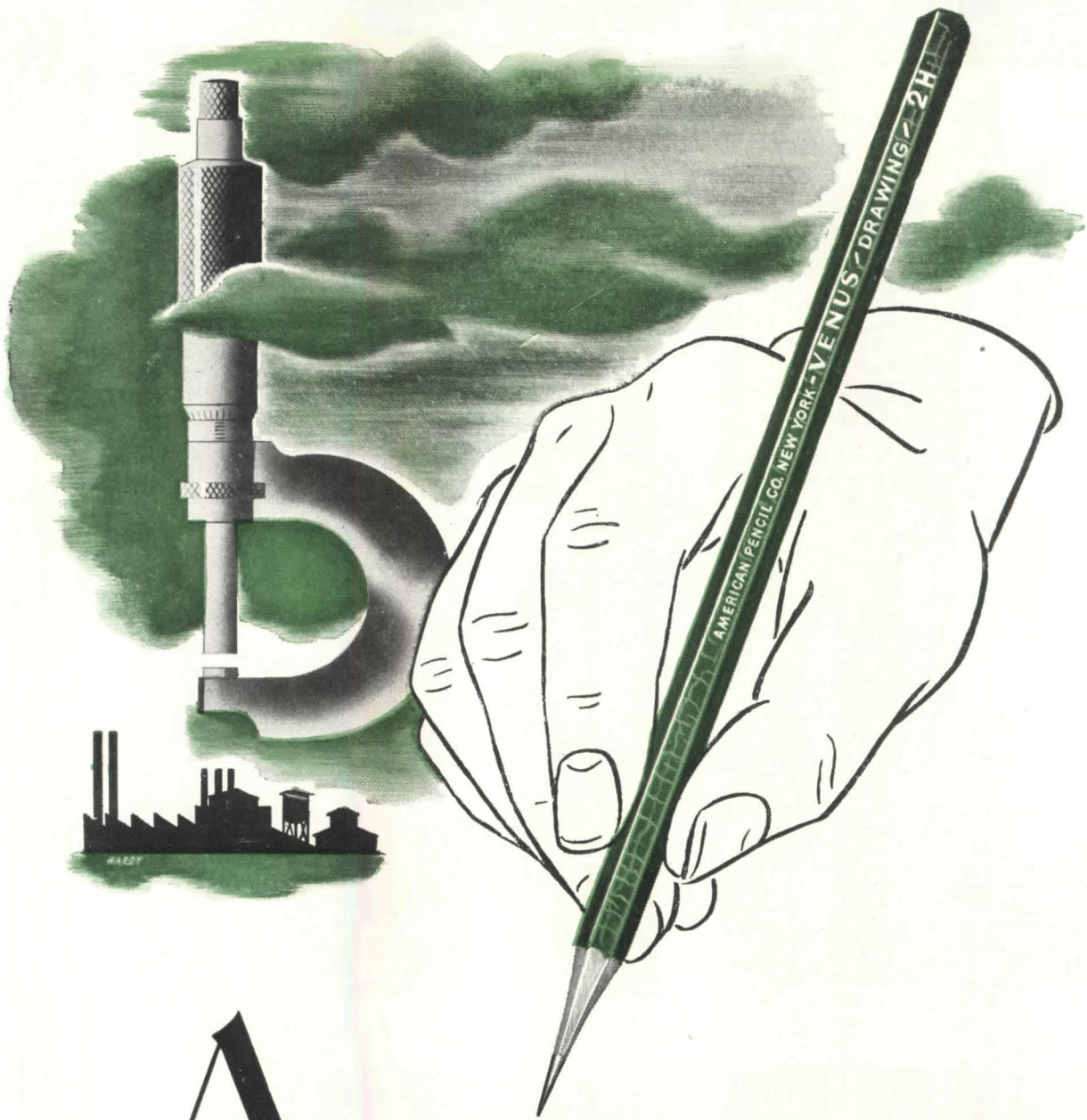
Mr. Kirchman, too, bases his irrationalisms of the so-called International school on the "outgrowth of esthetic principles which are *anti*-rational rather than rational in some of their fundamentals."

If architecture is utilitarian—the only major art that is an applied art—then it must be dominated by the demands of function. It seems to me that esthetics and logic or rationalism or function are inseparable. An esthetic principle of architecture if not rational surely falls without the field of esthetics.

I speak of function, not as a planning basis alone, but as a broad foundation providing that a building be suitable to its culture and the best construction practices available, to its plot and climate and surroundings, and to its immediate needs.

The revolt against the "highly materialistic theory of 'functionalism' " by early modern European architects was surely sound. A completely logical or functional solution need not be esthetically good. But a sound esthetic solution would of necessity be based on logic, on function, on rationalism.

MAYNARD PEARLSTINE
Columbia, S. C.



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THIS MONTH

A. QUINCY JONES, JR. PAUL R. WILLIAMS

While maintaining their own offices in Los Angeles, California, for commercial and residential work, architects **Paul R. Williams** and **A. Quincy Jones, Jr.**, have formed an association for the designing of clubs and hotels. One of the designs of this team, Palm Springs Tennis Club, is the first feature of this month's issue. Williams, a native Californian, won four consecutive competitions the year after he graduated from University of Southern California. This started him off in the field of domestic architecture; he has designed over 2,000 homes, from Canada to South America. This residential experience has now been applied to resort hotel design. His associate, Jones, was an honor student at University of Washington, and prior to opening his own office worked with architects in the Los Angeles area on various large projects, including the Fleet Operating Base at Terminal Island, California, the Naval Reserve Air Station in Los Alamitos, and housing projects and community centers.

Health facilities constitute the fifth building type discussed in our series of Critiques, continued this month. The first of two hospitals chosen for analysis is located in Greenwich, Connecticut, and comes from the New York office of Skidmore, Owings & Merrill. The principal responsible for this design is **Robert W. Cutler**, a partner in the firm. A graduate of Syracuse University, he has been an instructor at Mechanics Institute, New York, and prior to his present partnership, worked with several New York firms, including Schultze & Weaver; Bottomley, Wagner & White; and Eugene Schoen & Sons. While with Skidmore, Owings & Merrill he has been active in the firm's work on Sloan-Kettering Institute and James Ewing Hospital at Memorial Hospital Center for Cancer & Allied Diseases in New York, and New York University-Bellevue Medical Center.

ROBERT W. CUTLER

Southern Hospital, Stockholm, Sweden, the second hospital to be treated, is in reality a huge medical center, and is the work of the Swedish architect, **Hjalmar Cederstrom.**

The Dormitory for Keeley Institute, Dwight, Illinois, a center for the treatment and care of alcoholics, was designed by **Schweikher & Elting,** architects, of Roselle, Illinois, already known to our readers. (For biographical data, see December 1946 PROGRESSIVE ARCHITECTURE.)

A PROGRESSIVE ARCHITECTURE Award Honorable Mention, Wayne County Health Center, Michigan, comes from the office of Eberle M. Smith Associates, Detroit, Michigan. (For photograph of Mr. Smith, see June 1947 PROGRESSIVE ARCHITECTURE.) **Eberle M. Smith** was trained at University of Michigan College of Architecture, and has worked with Albert Kahn, Malcomson & Higgenbothan, and Nathaniel O. Gould, all of Detroit. He was associated with Maynard Lyndon from 1935 to 1942, when the firm of Lyndon & Smith was dissolved and he began practice under his own name. During the war period he designed and built institutional buildings for the Federal Works Agency, Federal Public Buildings Administration, and Federal Public Housing Authority.

F. A. NARAMORE P. B. JOHANSON C. J. BRADY W. J. BAIN

Also included in the group of health buildings is Naramore, Bain, Brady & Johanson's design of the King County Central Blood Bank, Seattle, Washington. An active Fellow of the A.I.A., **Floyd A. Naramore** is a past president of the Washington State Chapter. He is a graduate of Massachusetts Institute of Technology, and specializes in the design of schools and public buildings. **William J. Bain** is also a Fellow of the A.I.A., and a past president of the Washington State Chapter. Since his graduation from University of Penn-

(Continued on page 14)

THIS MONTH

(Continued from page 12)

sylvania he has conducted a general practice. Working particularly with school and public building design, **Clifton J. Brady**, a graduate of Iowa State College, has followed the precedent set by his two aforementioned partners, and is now president of the local chapter of the A.I.A. The fourth member of this Seattle, Washington, firm, **Perry B. Johanson** attended University of Washington, and is likewise an active participant in local A.I.A. affairs. His special field is public buildings and hospitals. Associated on this job with the firm was **Joseph Wohleb**, also of Seattle.

Two nurses' homes complete the Critique study this month. The home for Memorial Hospital in Anniston, Alabama, was designed by **Charles H. McCauley**, of Birmingham, who is already known to our readers as the architect of Sylacauga Hospital, also in Alabama. (For biographical note, see December 1946 PROGRESSIVE ARCHITECTURE.)

The nurses' home in St. Cloud, Minnesota, is one of the most recent projects of the firm of Long & Thorshov, Inc., of Minneapolis, Minnesota. The founding of their present office dates back to between 1880 and 1890, and its growth has paralleled that of the City of Minneapolis itself. With the firm since 1919, **Roy Norman Thorshov** has been president since 1928. He received his Bachelor of Architecture degree at University of Minnesota, and did his graduate work at Fontainebleau School of Fine Arts in France and at University of Minnesota. During 1933 and 1934 he served as director of the housing survey conducted in Minneapolis, and from 1934 to 1936 he worked with the Home Owners Loan Corporation, Reconditioning Division. He is vice president of the Minnesota Chapter, A.I.A., and a member of American Interprofessional Institute. **Henry T. Shotwell** has been a partner in the firm since 1945. A Bachelor of Architecture from Pratt Institute in New York, his first experience was with the New York firm of Githens and Keally. From 1938 to 1940 he was an architect with National Youth Administration in Washington, D. C., specializing in the development and execution of wood panel prefabrication for youth training centers. Before his present partnership he also worked, from 1940 to 1945, as chief architect for Rural Electrification Administration in Washington, D. C., and St. Louis, Missouri. His war service was with the Office of Scientific Research and Development, where he was assigned to the Army Air Forces as operations analyst. **Robert G. Cerny**, the third principal in the firm, was trained at University of Minnesota and received his M. Arch. from Harvard. He

(Continued on page 16)

ROY NORMAN THORSHOV

HENRY T. SHOTWELL

"Our own experience convinced us . . . .

BRUCE FINISHED FLOORS rate HIGH in buyer appeal ...LOW in installed cost!"

Reports HARRY J. DURBIN
Well-known Detroit home builder

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He writes: "Our records, covering eight years' experience with Bruce Finished Floors, show that elimination of the sanding and finishing operations required with old-type strip flooring has saved us an average of $30 to $35 and three working days per unit.

"These savings, combined with the almost unanimous enthusiasm of our buyers and tenants for the exceptional beauty and wearing qualities of the finish, have convinced us that Bruce Finished Flooring is the outstanding flooring in the market today."

All over the country, many leading operative builders like Mr. Durbin are having similar experiences. They're discovering, just as he did, that Bruce Finished Floors are best because they eliminate unnecessary costs and give the buyer a more beautiful floor with a superior, long-lasting finish.

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Memphis, Tennessee
World's Largest Maker of Hardwood Floors

Merle W. Hogan, Architect for Durbin homes, writes:

"Bruce Finished Flooring was first specified by me in 1939 for use in homes built by Harry J. Durbin. Since that time I have specified it for hundreds of clients and observed how it withstood years of use.

"I am sure Bruce Finished Flooring provides a better floor for residential use than ordinary flooring. It provides a pleasing pattern and a fine finish which is easily cleaned and maintained.

"I have also found that Bruce Finished Flooring actually costs less and saves time during construction."

Yours very truly,

MERLE W. HOGAN,
A. I. A.

BRUCE FINISHED FLOORS

THIS MONTH

(Continued from page 14)

was granted a fellowship from Harvard in 1935, and traveled through Europe for nine months studying town planning, housing, and modern architecture. His early experience was with TVA in Knoxville, Tennessee, and in 1936 he was appointed secretary of the Knoxville Housing Authority. The following year he was invited to teach architecture at University of Minnesota, where he is now an associate professor. From 1937 to 1942 he practiced architecture under the firm name of Jones & Cerny, and from 1942 to date he has been a consulting designer with Long & Thorshov. He is a member of the A.I.A., executive secretary of Minneapolis Civic Center Development Association, and chairman of the Mayor's Emergency Housing Committee.

The residential example chosen this month by the editors is also from a Minneapolis architectural firm, **Elizabeth and Winston Close.** Their office was started in 1938 under the name of Close and Scheu, but they "later made the partnership more inclusive by getting married and changing the name of the firm." Close is a graduate of University of Minnesota and M.I.T. Mrs. Close, a native of Vienna, studied for two years at Technical University of Vienna before coming to M.I.T. to complete her architectural training. From the first the Closes say they were "determined not to do any 'stylistic' work, and not too optimistic about our chances of staying alive on that basis. But surprisingly many people seemed to want contemporary design, and we have been busy steadily."

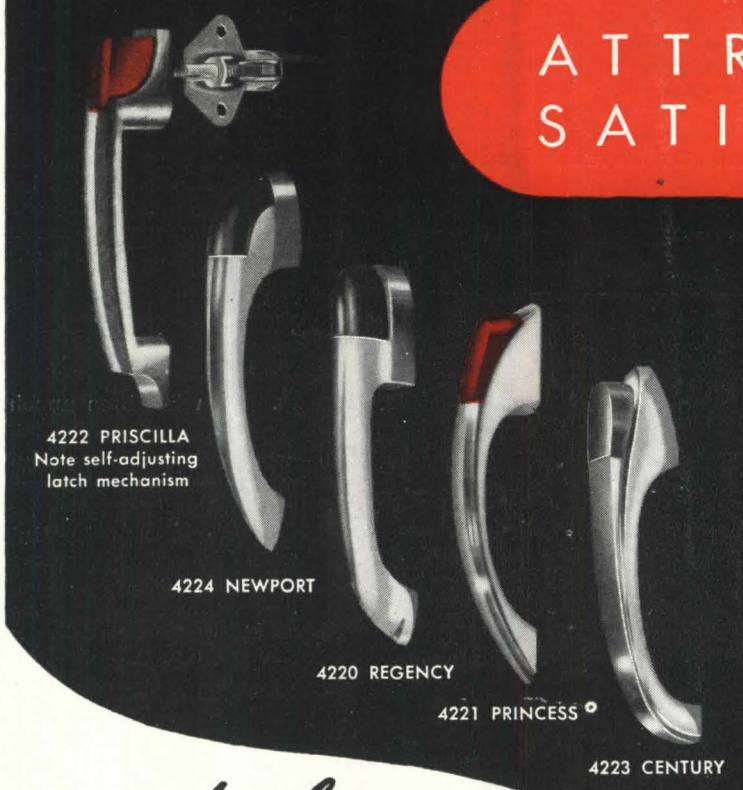
ROBERT G. CERNY

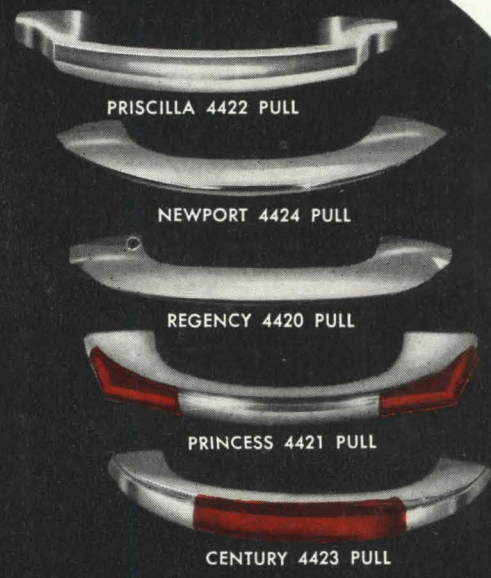
ELIZABETH AND WINSTON CLOSE

Closely allied to the Health Facilities Critique is the lead article in the Materials and Methods section this month, "Don't Be Afraid of Hospital Equipment." The introduction to this article has been written for us by Leighton M. Arrowsmith and John Rannells. **Leighton M. Arrowsmith** is a past administrator of St. John's Hospital in Brooklyn, New York, and has long been associated with the standardization of administrative methods in hospitals. He is at present with New York State Department of Mental Hygiene. **John Rannells'** name will be familiar to our readers as our technical book reviewer this past year. He is an architect with the office of Shreve, Lamb & Harmon in New York, with a special interest in hospital design.

Another *in the* series of streamlined specifications, which have aroused great interest and enthusiasm among our readers, completes this month's issue. The specification, on casework for hospitals, is by **Ben John Small,** author of the earlier article on "Specification Surgery." Since this article and biographical information on Mr. Small appeared in the August 1946 PROGRESSIVE ARCHITECTURE, he has co-authored, with Clinton H. Cowgill, a book, *Architectural Practice,* recently published by Reinhold Publishing Corporation.

ATTRACTION... SATISFACTION!





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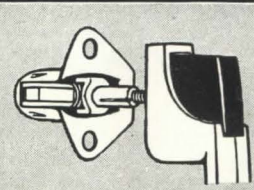

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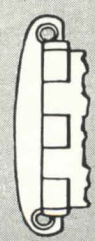
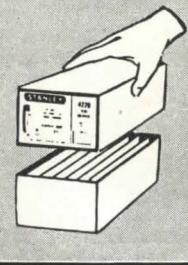


5-KNUCKLE HINGES. Five knuckles for strength. Raised barrel permits door to open full 180°.



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NEXT MONTH

● Newest and largest of the TVA storage dams on the headwaters of the Tennessee River, Fontana Dam, and auxiliary structures will be featured in our next issue. This is a notable example of the gravity type of uncurved dam, which relies upon the weight of the massive concrete structure to hold back the waters of the river in the narrow valley behind it.

● Several building types will be explored in the same issue. From the office of Wurster, Bernardi & Emmons, San Francisco architects, we have chosen an industrial office building at Niles, California. Design possibilities of a new kind of building are suggested by overnight cabins in South Yarmouth, Massachusetts, the work of David Fried, Boston architect. Completing this section will be a men's wear shop in Beverly Hills, California, by Maynard Lyndon, Los Angeles architect; an arts and science building of the Ricker Classical Institute at Houlton, Maine, by Alonzo J. Harriman, Inc., of Auburn, Maine; and a house at Whitewater, Wisconsin, by William V. Kaeser, Madison architect.

● Most of the Materials and Methods section will be devoted to a discussion of "Apartment House Elevators," by H. M. Nugent and W. H. Easton, Jr., both of Otis Elevator Company. They outline and analyze the considerations which are basic in the selection of elevator equipment for apartment buildings. There will also be the concluding pages of the typical streamlined specifications for metal casework for hospitals, by Ben John Small, started this month.

NOTICES

APPOINTMENTS

E. MICHAEL CZAJA has been appointed associate professor on the department of architectural engineering faculty at Washington State College, Pullman, Wash.

Two new appointments to the University of Oregon School of Architecture and Allied Arts are JEAN KENDALL, who returns as assistant professor after a 3-year absence, and LYNN ALEXANDER, a new instructor in Art.

North Carolina State College of Agriculture and Engineering, University of North Carolina, announces the appointment of LAWRENCE ALBERT ENERSEN as professor of landscape architecture.

PROF. HERBERT REEVES SINNARD has been named head of the department of architecture at Oregon State College, Corvallis, Ore.

JOSEPH BLUMENKRANZ has been appointed by the U. S. War Department, Corps of Engineers, as consultant on the nationwide hospital program for the Veterans Administration. Mr. Blumenkranz has acted as hospital consultant on 3 veterans' hospitals during the past year, and prior to that was Architect and Hospital Consultant to the Government of Puerto Rico and Senior Architect of Hospitals with the City of New York. His offices are at 535 Cathedral P'kway, New York 25, N. Y.

NEW ADDRESSES

HUSON JACKSON & JOHN HANCOCK CALLENDER, 124 Washington Pl., New York 14, N. Y.

SANFORD W. GOIN, 634 E. Church St., Gainesville, Fla.

S. BRIAN BAYLINSON, 215 E. 37th St., New York 16, N. Y.

PAGE & STEELE, 72 St. Clair Ave. W., Toronto, Canada.

DOUGLAS DACRE STONE & LOU B. MULLOY, 619 California St., San Francisco 8, Calif.

CHARLES F. MALTBY, Kirby Bldg., 246 N. Main St., Herkimer, N. Y.

HARRY L. ALPER, 565 Fifth Ave., New York, N. Y.

Announcing

TO ALL ARCHITECTS IN THE UNITED STATES

The Second Annual

PROGRESSIVE ARCHITECTURE AWARDS

For 1947 the publishers of PROGRESSIVE ARCHITECTURE will make two national Awards.

1

TO THE ARCHITECT of the building or group of buildings (not a private residence), constructed during the year in the United States, which best exemplifies sound progress in design.

2

TO THE ARCHITECT of the private residence, constructed during the year in the United States, which best exemplifies sound progress in design.

Every architect in the United States is invited to present his best work or make nominations for review by a distinguished professional jury. The Awards are intended to foster sincere, reasoned progress in architectural design in the United States by citation and recognition of those architects whose efforts to improve contemporary standards are judged the most successful.

The Awards will consist of suitable certificates to be given to the winners at a presentation dinner attended by nationally prominent speakers and leaders of the profession. It is proposed to give the dinner in or near the home town of one of the Award winners.

JURY

The buildings to be cited as the best constructed during 1947 will be selected by a jury qualified to consider all aspects of the building. Thomas H. Creighton, Editor of PROGRESSIVE ARCHITECTURE, will be the professional adviser.

PROGRAM

The only basis for selection of the buildings winning Awards in the two classifications above described will be demonstrable progress in fitness, strength, beauty, and purpose. The jury will be asked to give consideration to the appearance, plans, structure, use of materials, site arrangement, and relation to community plan and community needs.

ENTRIES

Every architect in the United States is invited to present before March 1, 1948, the best of his own work constructed during 1947—also to nominate buildings by other architects that he believes worthy of consideration by the jury.

Each submission should include at least three photographs, not smaller than 8" x 10", showing both the interior and the exterior of the building, as well as a plot plan, floor plans, and a brief description of the function of the building and its outstanding features. More detailed information may be requested by the professional adviser after preliminary examination of the work submitted.

INQUIRIES

Entries or inquiries about the Annual PROGRESSIVE ARCHITECTURE Awards should be addressed to Thomas H. Creighton, Editor, PROGRESSIVE ARCHITECTURE, 330 West 42nd Street, New York 18, N. Y.

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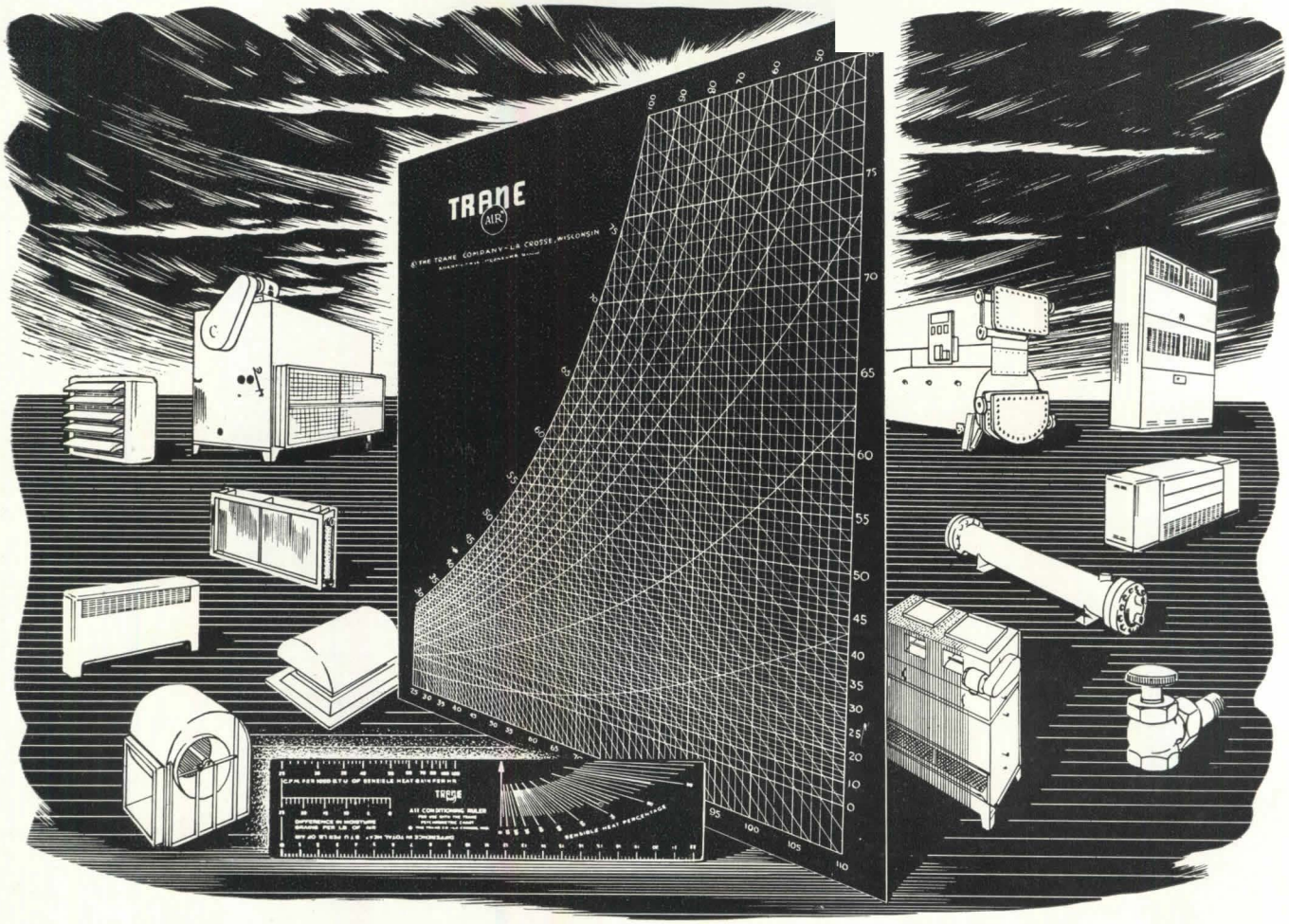

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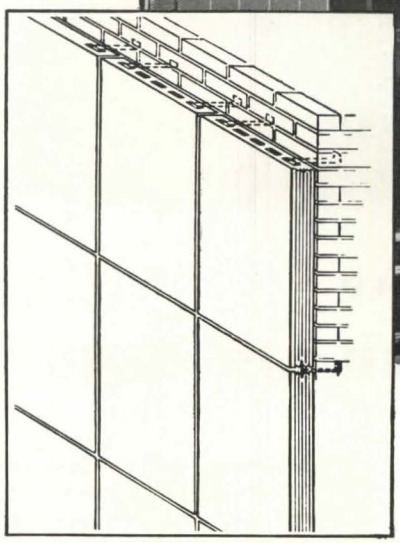

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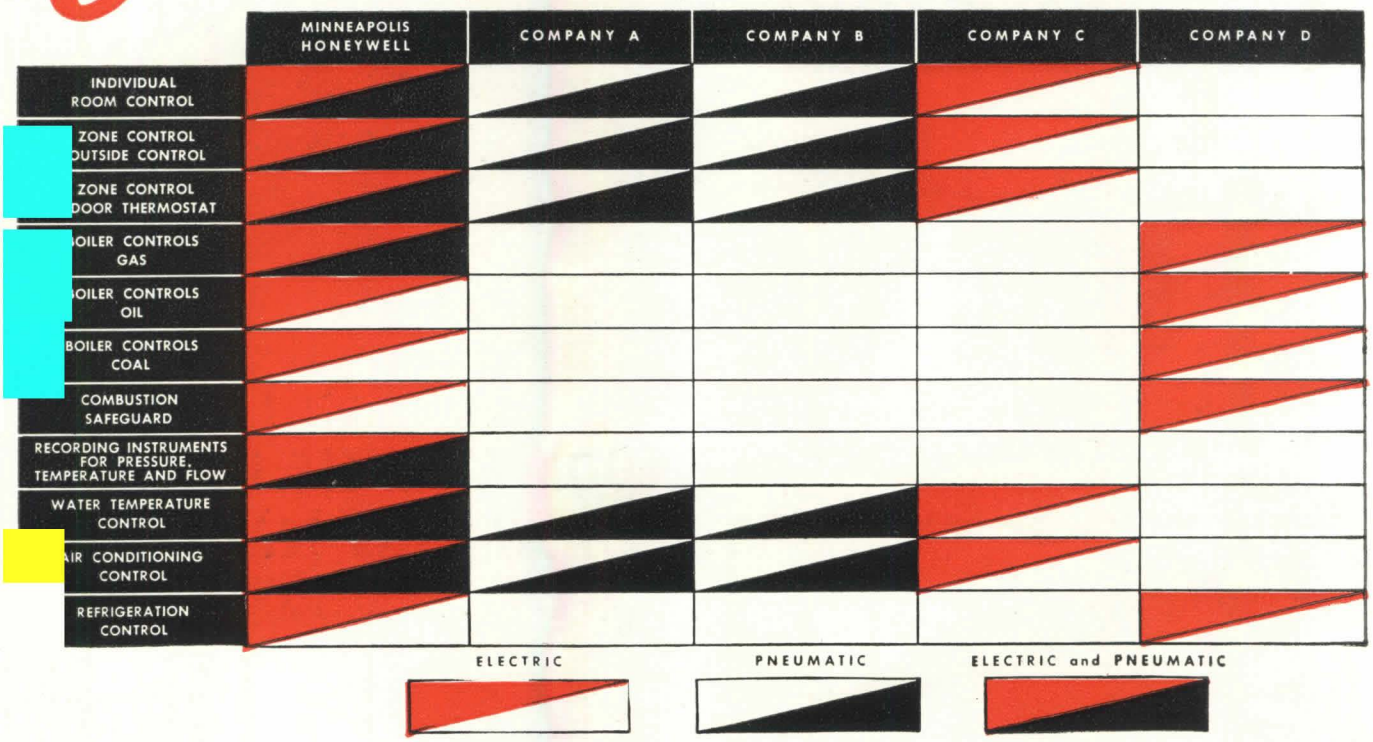

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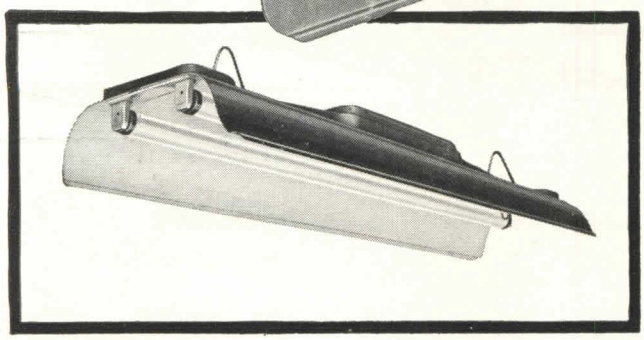

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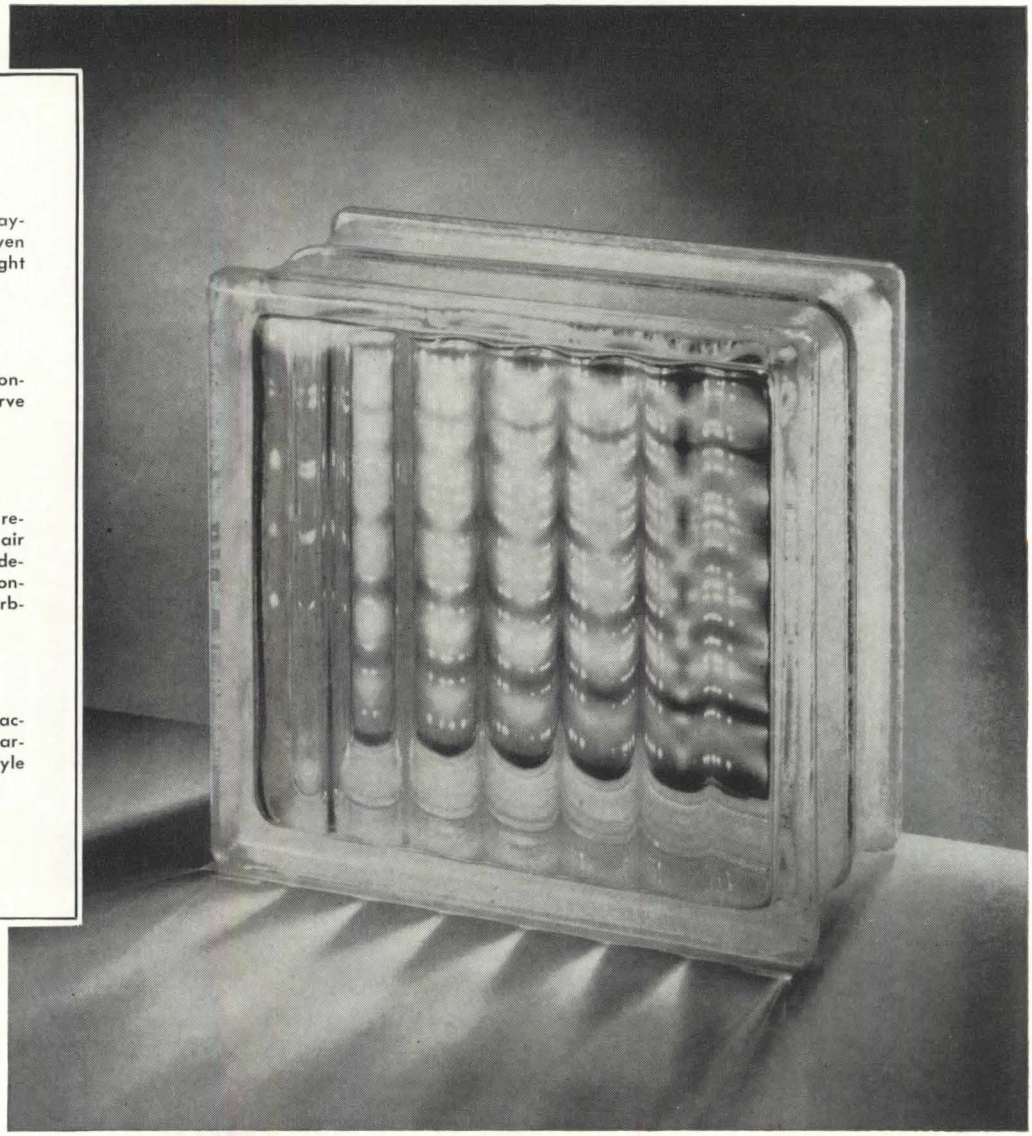

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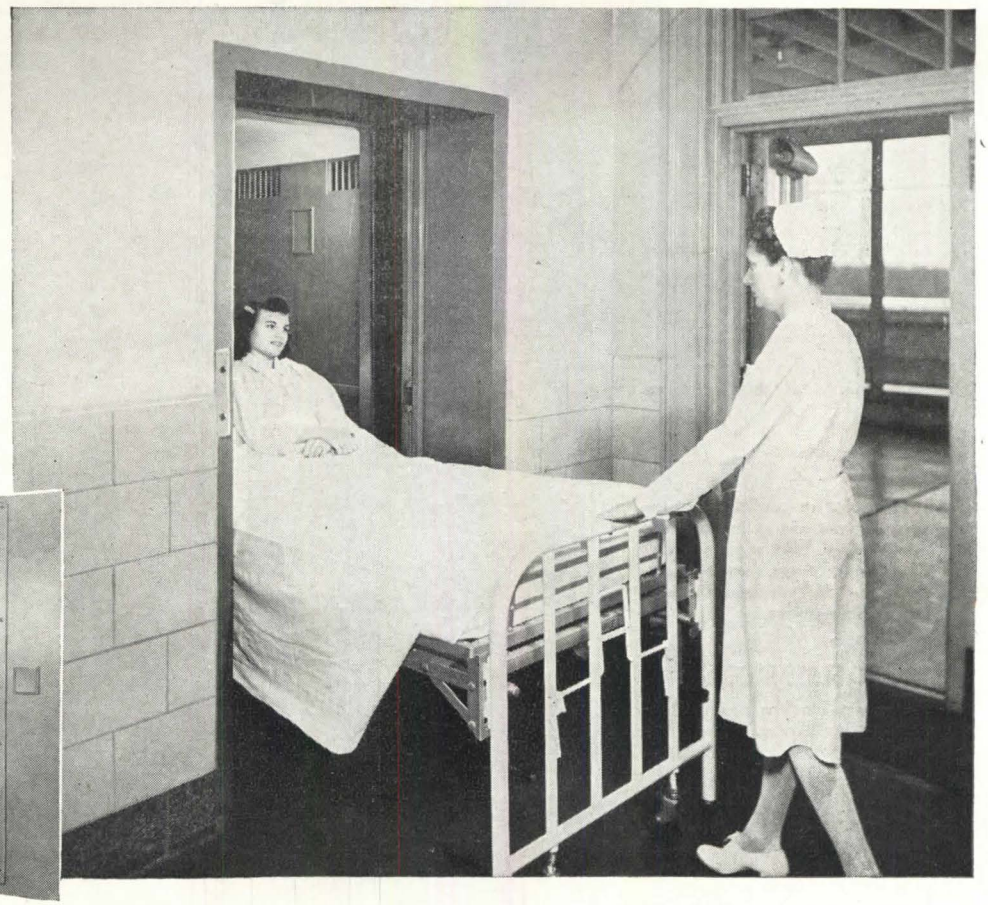

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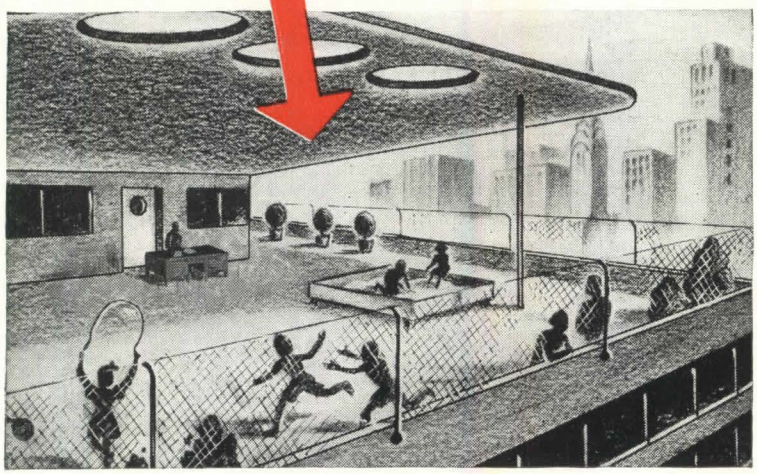

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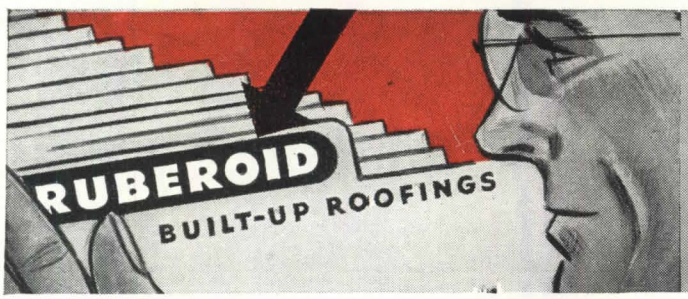
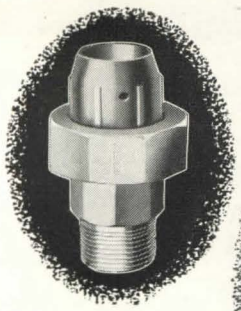
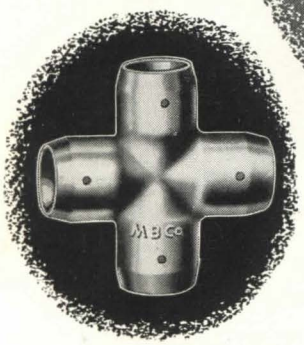
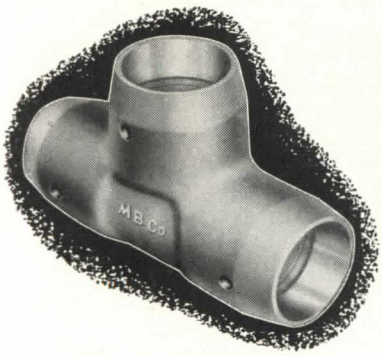
The RIGHT roof for any job—from one source!

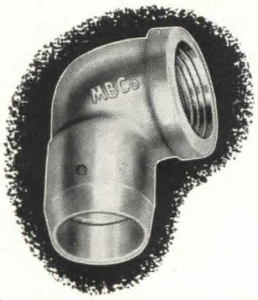


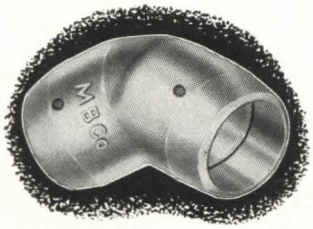
Remember that Ruberoid makes *every type* of built-up roof—Smooth Surfaced Asbestos, Coal Tar Pitch with gravel or slag surfacing, or smooth or gravel-and-slag surfaced Asphalt—in specifications to meet any need. Hence a Ruberoid Approved Roofer is not prejudiced in favor of any one type. His services assure you of one source for all materials, centralized responsibility, smoother operation, uniform quality!

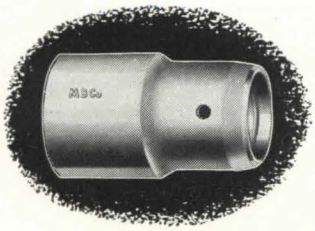












— MUELLER BRASS CO — PORT HURON MICH — STREAMLINE — MUELLER BRASS CO — PORT HURON MICH — STREAMLINE — MUELLER BRASS CO — PORT HURON MICH — STREAMLINE —

WHEN THE ARCHITECT *Specifys* THE CLIENT CAN BUY— WITH *Confidence*.....

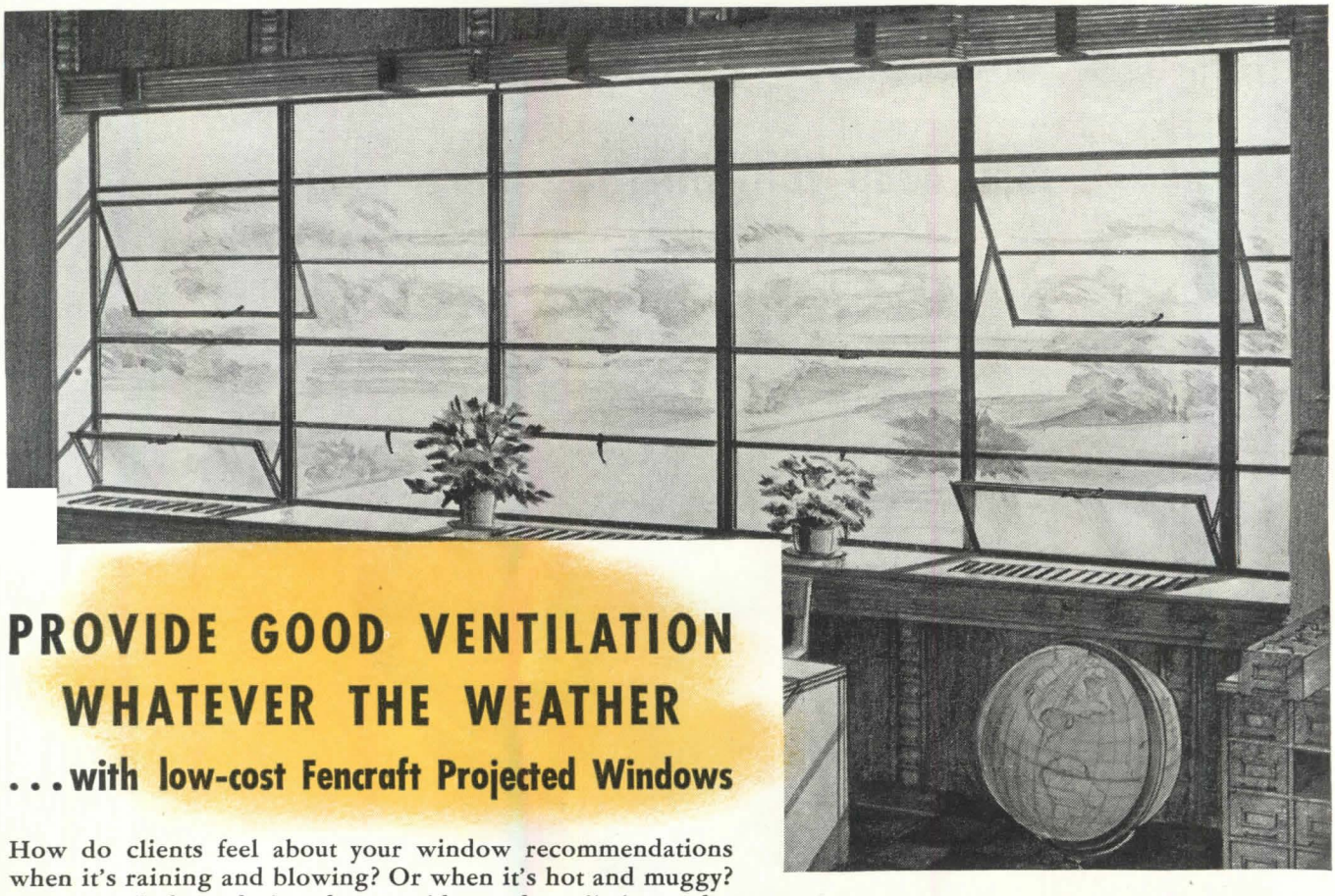
EVERY architect knows he builds his reputation upon his recommendations because the very livability of the homes and buildings he designs depends upon his specifications. A reliable piping system for plumbing and heating is one of the most important factors in the building, and your clients' confidence in your recommendations should be proven by years of efficient, trouble-free service.

When you specify Streamline Copper Pipe and Solder Type Fittings, you may feel assured your recommendations for a permanently reliable piping system have been met.

Streamline Copper Pipe connected with Streamline Solder Type Fittings provide a piping installation incorporating a tremendous resistance to rust and vibration. Copper and Brass have long proved to be superior piping materials. They are practically indestructible under normal conditions of soil and water, or the wear and tear of everyday use.

A plumbing and heating system of Streamline Copper Pipe and Solder Fittings installed under normal conditions means efficient, trouble-free performance year after year for the life of the building. For the latest modern designs on your board plan now to recommend Streamline for dependable, life-long service.

STREAMLINE
PIPE AND FITTINGS DIVISION
MUELLER BRASS CO.
PORT HURON, MICHIGAN



PROVIDE GOOD VENTILATION WHATEVER THE WEATHER

. . . with low-cost Fencraft Projected Windows

How do clients feel about your window recommendations when it's raining and blowing? Or when it's hot and muggy? Here are windows designed to provide good ventilation under the most adverse conditions:

OPEN-OUT VENT forms canopy over the opening. It sheds rain and snow away from the opening.

SILL VENT deflects incoming air upward and thus prevents drafts at desk level. And it sheds rain and snow to the outside.

EACH VENT is easy to reach, always easy to open. Each stays open in the selected position and closes to a weathertight fit.

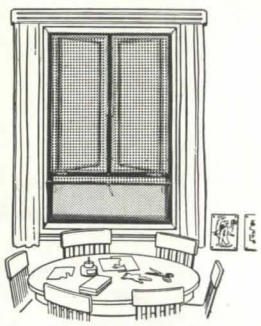
Fencraft Projected Windows are safer—the sill vent prevents leaning out, guards against falls. Close-fitting screens are easily attached or removed from inside the room.

Economical, too. Standardization results in lower manufacturing costs. Dimensions co-ordinate with modern masonry practice to reduce installation time and costs. Maintenance is low, for steel can't warp, swell, shrink or rot.

There's beauty in the trim horizontal lines of Fencraft Windows. Extra firesafety because they're steel. They're designed *right* for the modern buildings that are coming from today's drafting boards. See Sweet's (Section 16 a-9) or mail the coupon for full information.

FENCRAFT COMBINATION WINDOW

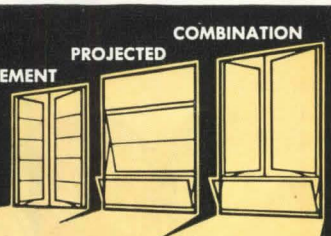
Generous fresh-air ventilation. Swing leaves deflect breezes into the room. Intilting sill vent protects against drafts. Both sides easily and safely washed from inside.



FENCRAFT CASEMENT WINDOW

Safe washing on outside—from inside. Easy to operate. Interchangeable inside screens, protected from outside dirt.

Fenestra



FENCRAFT INTERMEDIATE STEEL WINDOWS

Detroit Steel Products Company,
Dept. PA-11
2253 East Grand Blvd.,
Detroit 11, Michigan

Please send me data on types and sizes of the new Fencraft family of Fenestra Windows:

Name_____

Company_____

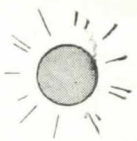
Address_____

What keeps the walrus feeling swell

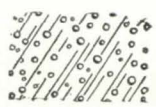
can keep your clients happy, too!

Over 90 years of successful roofing experience has demonstrated the sound value of the gravel or slag wearing surface for built-up roof construction.

1. It holds in place the heavy poured (not mopped) top coat of coal-tar pitch which provides an extra thick waterproof covering.



2. It provides protection against the sun's actinic rays which otherwise dry out the valuable oils in roofing bitumens.



3. It protects the roof against mechanical damage, hail and wind, wear and tear.

4. It interposes a fireproof surfacing material between the building and flying embers—makes a roof that carries Fire Underwriters' Class A Rating.

The ice-capped Arctic seas appeal to Mr. Walrus—he'd rather be there than anywhere! Because good old Nature has given him a thick, tough hide as protection against the elements.

Like the walrus, the Barrett Specification* roof has *extra* protection—an *armored wearing surface.*

Built up of alternate layers of coal-tar pitch and felt, topped by a thick *pouring* of pitch to *anchor* the gravel or slag wearing surface, Barrett Specification roofs are the toughest, longest-lasting, built-up roofs made!

Remember these facts when you write your building specifications. Protect your buildings with Barrett Specification coal-tar pitch and felt, applied by Barrett Approved Roofers according to Barrett application methods, and you've provided your client with lasting freedom from roof troubles. Barrett Specification roofs are so reliable that they can be bonded against repair and maintenance expense for as long as 20 years.

Barrett* Specification* Roofs

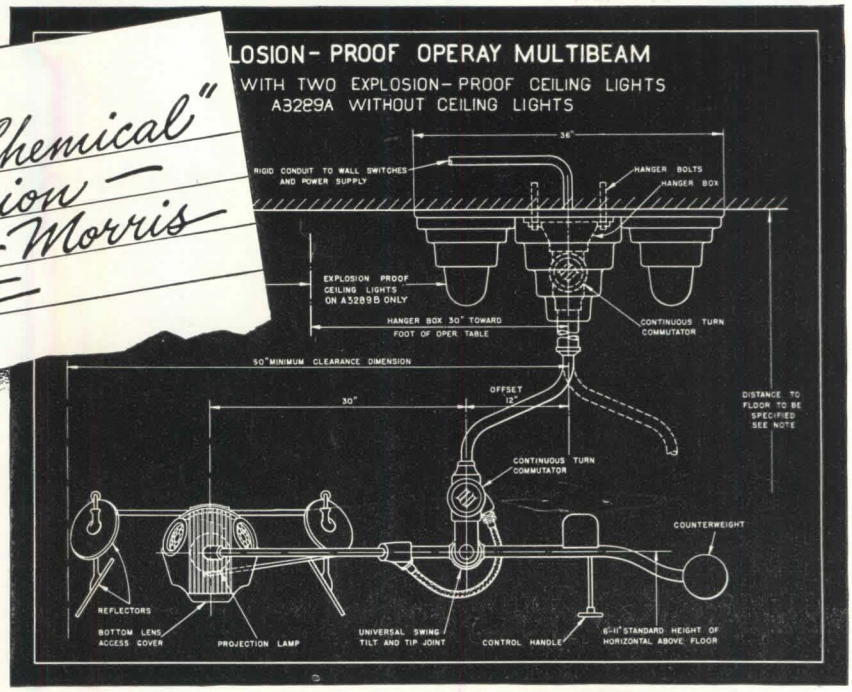
*Reg. U. S. Pat. Off

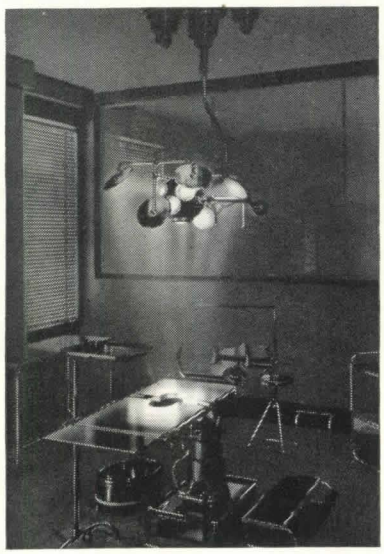
THE BARRETT DIVISION

Allied Chemical & Dye Corporation
40 Rector Street, New York 6, N. Y.
2800 So. Sacramento Avenue, Chicago 23, Ill.
Birmingham, Alabama
36th Street & Gray's Ferry Road, Philadelphia 46, Pa.
In Canada: The Barrett Company, Ltd., 5551 St. Hubert Street, Montreal, Que.

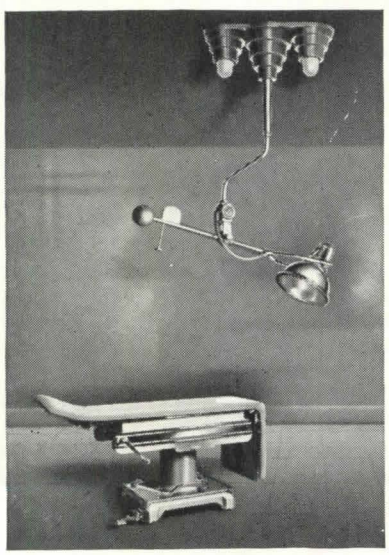
MEMO

Write "Ohio Chemical" for info Explosion-Proof Scanlan-Morris surgical lights





Explosion-Proof Operay Multibeam Light



Explosion-Proof Operay Surg-O-Ray Light

Ceiling HOSPITAL ~~FLOOR~~ PLANS

should include provision for

Explosion-Proof Surgical Lights

• For more than 40 years architects and hospitals have received valuable assistance and authentic guidance in planning for many major items of hospital equipment manufactured by Scanlan-Morris. They have found this service especially helpful in planning for surgical lighting.

Efficient surgical lighting plus adequate protection against fire and explosion hazards in the anesthetic area is the dual accomplishment of Scanlan-Morris Operay explosion-proof surgical lights. These fixtures are approved by Underwriters' Laboratories for use in Class 1 Group C Hazardous Locations—a classification that includes operating and delivery rooms employing explosive anesthetic gases.

Scanlan-Morris Operay lights are widely used in prominent hospitals. The lights are made in two general types, as illustrated: Operay Multibeams and Operay Surg-O-Ray. The ceiling fixtures are furnished either with or without auxiliary ceiling lights for general illumination.

The Scanlan-Morris Technical Sales Service Department will be glad to supply complete information, including installation drawings, and will also welcome opportunities to cooperate with architects in correct planning for surgical lighting based on building plans. Such service is freely offered, without obligation, not only on surgical lighting but also on sterilizing equipment, recessed cabinets and other major items of hospital equipment manufactured by Ohio Chemical. Mail the coupon for detailed information.

Ohio Chemical

MANUFACTURERS OF MEDICAL APPARATUS, GASES AND SUPPLIES FOR THE PROFESSION, HOSPITALS AND RESEARCH LABORATORIES

BRANCH OFFICES IN PRINCIPAL CITIES

OHIO

THE OHIO CHEMICAL & MFG. COMPANY
1400 East Washington Ave., Madison 3, Wisconsin

Represented in Canada by Oxygen Company of Canada, Limited, and Internationally by Airco Export Corporation, 33 West 42nd Street, New York

THE OHIO CHEMICAL & MFG. CO.,
1400 E. Washington Ave., Madison 3, Wis.

Send information on ☐ Scanlan-Morris Explosion-Proof Surgical Lights. (Please attach professional card or letterhead)

Name .....

Address.....

City .....State ..... PA

Are your draftsmen busy wasting time?

USE THE ELLIOTT FISHER ELECTRIC LETTERING MACHINE TO SAVE YOU COSTLY HOURS OF HAND LETTERING

LOOK at the above picture again. Those men are skilled draftsmen and engineers. If they are using time . . . your time . . . to hand-letter information on mechanical drawings, they may be wasting their time . . . and your money.

Here's the answer: install an Elliott Fisher Electric Lettering Machine. This will relieve your high-paid technical men of practically all tedious hand lettering. It will enable them to employ their skill on work which requires their special knowledge.

Operation of the Electric Lettering Machine is simplicity itself. An office typist, after a little practice, can turn out superior lettering jobs. She can letter plans, charts, schedules with mechanical accuracy . . . and at typing speed.

With the Electric Lettering Machine, the expense, drudgery, and uncertain appearance of hand lettering become things of the past. Instead, you save time and money and get perfect legibility.

There are other facts you should know about this machine, including its wide acceptance in the engineering field . . . and its wide application to many typing and printing jobs.

The coupon will bring you full information. Mail it today.

CHECK THESE OUTSTANDING ADVANTAGES

ELECTRIC KEYBOARD . . . a full standard, electric keyboard . . . fast, simple and easy to operate . . . many times faster than hand methods.

SHARP AND CLEAR IMPRESSIONS . . . a Special Blue Print Ribbon plus Dual Stroke Control of the electrically operated type bars assure proper density of every type impression to provide sharp and clear reproductions.

FLAT WRITING SURFACE PLATEN . . . flat as a drawing board . . . accommodates small or large drawings with equal facility . . . provides unlimited flexibility for making corrections or revisions without removing the drawing from the machine.

COMPLETE VISIBILITY . . . approximately 396 square inches of any large drawing or tracing may be clamped in lettering position on the platen quickly and easily. This entire area is completely visible to the operator for lettering at will.

PIN-POINT ACCURACY . . . lettering can be positioned with pin-point accuracy anywhere on a drawing quickly and easily . . . a notched rifle-sight line-indicator tells the operator exactly where a type will print.

Underwood Corporation

Accounting Machines . . . Adding Machines . . . Typewriters . . . Carbon Paper . . . Ribbons and other Supplies

One Park Avenue — New York 16, N. Y.

Underwood Limited, 135 Victoria St., Toronto 1, Canada

Sales and Service Everywhere

UNDERWOOD CORPORATION, One Park Avenue, New York 16, N. Y. PA-1147

Please send me full details on the Underwood Elliott Fisher Electric Lettering Machine.

Name_____

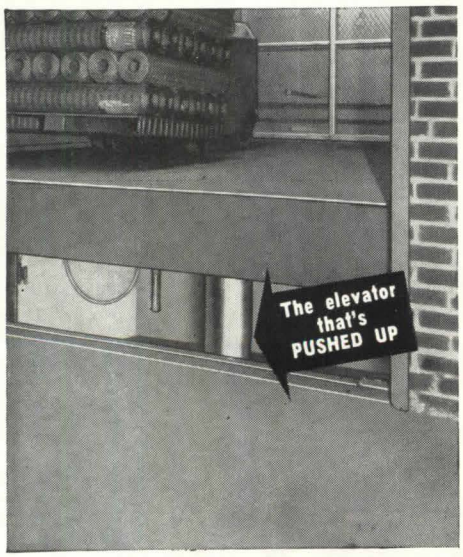
Street_____

City_____ Zone_____ State_____

Solution to an Elevator Problem!

SPECIFY OILDRAULIC ELEVATORS

When power trucks are used for elevator loading



In designing new buildings or modernizing old ones, it is important to select elevators built to take the shock loads imposed by power trucks which are now universally used in handling freight.

OILDRAULIC TAKES THE LOAD

Oildraulic operation is perfect for this type of service. The elevator and its load is positively supported on the "oil locked" hydraulic jack. This takes the load off the building structure, makes it possible to use lighter sidewall and shaftway construction. Also, it means accurate landing stops . . . the elevator car "evens up" with the floor and holds its position. Jolts and jars caused by power truck loading are reduced to a minimum.

CAR CONSTRUCTION IS RUGGED

Car construction on an Oildraulic Elevator is rugged with a strongly reinforced sling and platform. Built to take hard wear, it will withstand off-center loading and rough service.

OTHER IMPORTANT ADVANTAGES

Other advantages of Oildraulic Elevators are: (1) No costly, unsightly penthouse required as the car is pushed up, not pulled up. (2) Compact electric power unit can be located under a stairway or in any convenient space at any landing, as pictured above. (3) Operating cost is low . . . power used only on rise, descent by gravity.

For data to help solve *your* elevator problems

ROTARY LIFT CO.
1014 Kentucky, Memphis 2, Tenn.

Send Catalog RE-301 (AIA File 33) to:

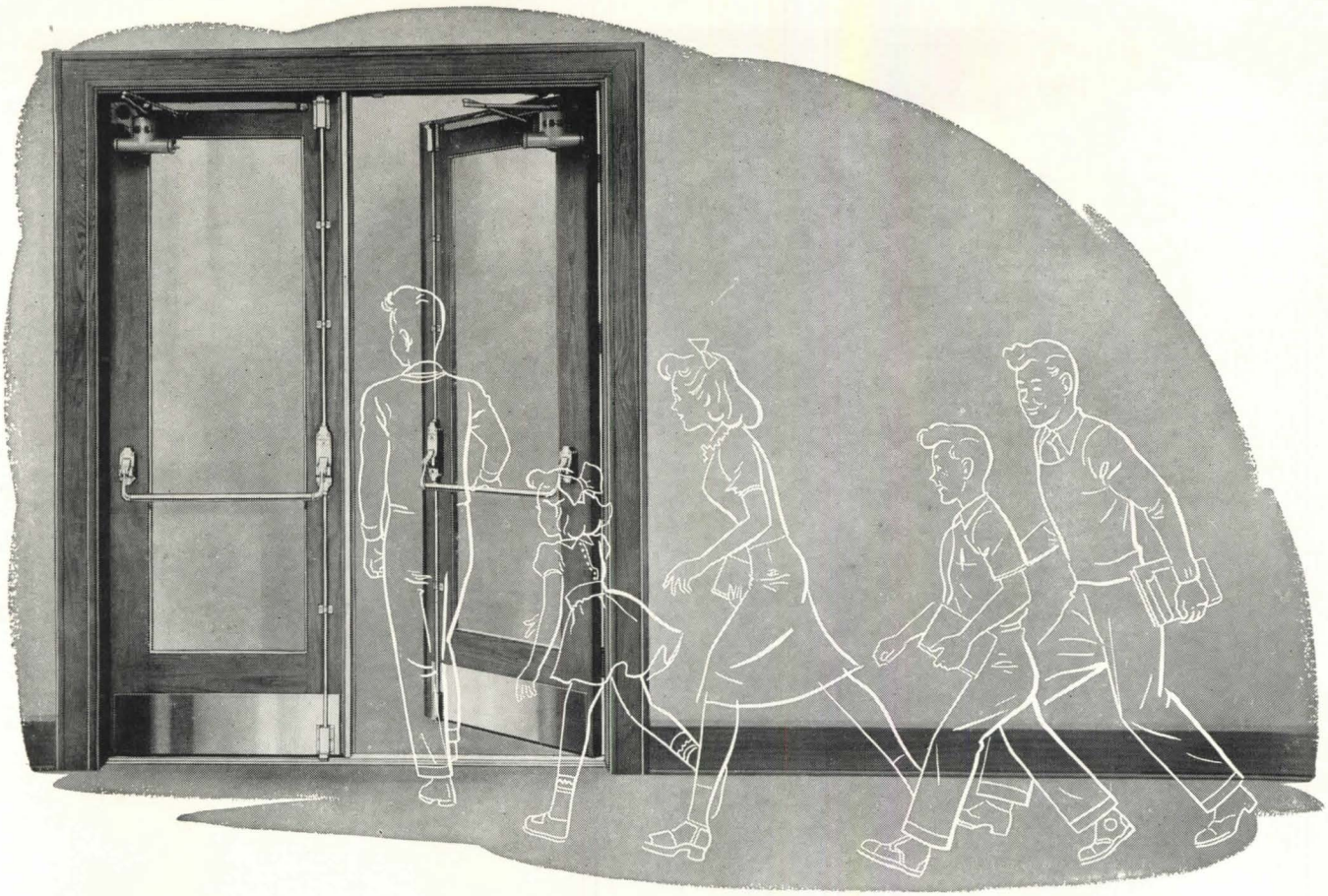
Name.....

Address.....

City & State.....

Rotary* **OILDRAULIC* ELEVATORS**

*Reg. U. S. Pat. off.



The SURE Way Out

Von Duprin Drop Forged Exit Devices on the doors provide the surest, safest, fastest way out of buildings. They withstand the wear and tear of daily use — and still have the reserve to meet the violent demands of the crucial moment. Under any conditions they are easily operated, even by small children. Furthermore, over the life of the building, their cost per year is far lower than that of less sturdy devices.

See Sweet's Catalog, 17 b/6

Listed by Underwriters' Laboratories, Inc.

VON DUPRIN DIVISION
VONNEGUT HARDWARE CO., INDIANAPOLIS, INDIANA

Von Duprin

TRADE MARK REG.

Youngstown Steel Pipe has been used successfully in radiant or panel heating service for many years, as this old advertisement shows.

YOUNGSTOWN

THE YOUNGSTOWN SHEET AND TUBE COMPANY

GENERAL OFFICES - YOUNGSTOWN 1, OHIO

Export Offices - 500 Fifth Avenue, New York City

Manufacturers of

CARBON - ALLOY AND YOLOY STEELS

Pipe and Tubular Products - Sheets - Plates - Conduit - Bars - Coke Tin Plate - Electrolytic Tin Plate - Rods - Wire - Tie Plates and Spikes.

THIS is an advertisement published six years ago--three years after Denison Bingham Hull, Winnetka, Ill., architect, had installed a panel heating system in his new home. He used Youngstown Steel Pipe and at that time stated that the system was performing 100% satisfactorily.

Mr. Hull has just been interviewed again. He is still enthusiastic about panel heating--says the pipe and the rest of the system are still performing to his complete satisfaction after nine years. He considers panel heating very economical--it saves him 20% in his annual heating bills, compared to other types of systems. He would certainly use this same system if he ever builds again.

Youngstown steel pipe, fully tested and proved dependable in this service, is available now for radiant or panel heating jobs, as well as for conventional steam and hot water heating systems, water systems and all other piping needs.

Doublex partitions transmit light to offices, provide a rich background for selling displays. Neumann Brothers Jewelry, Toledo, Ohio.

Satinol Louvrex screen partitions highlight merchandise and diffuse light to all display sections at International Silver Company. Architect: Carl Conrad Braun.

Decoration does Double Duty

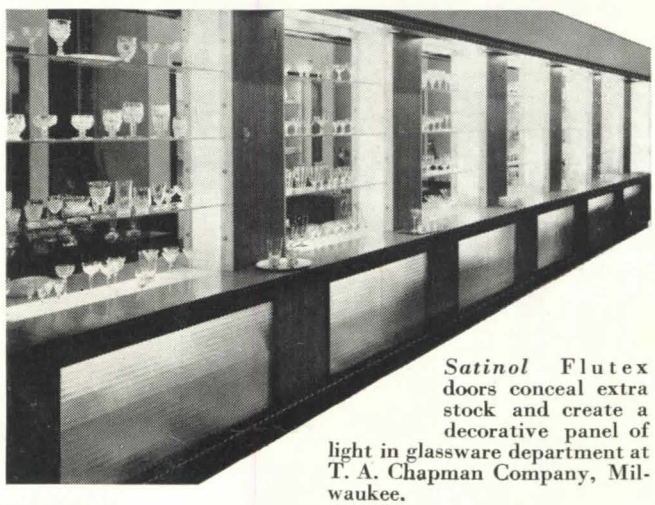
...WITH

Patterned Glass

When interior decoration must do a *selling* job, designers and architects turn to Blue Ridge *Patterned* Glass.

This distinctive glass solves display problems as does no other material. Because it transmits light yet obscures views, it may be used for decorative walls, screens or partitions to departmentalize shops or to separate offices from selling floor. Clear or *Satinol*-finished, its sparkle creates a background of lasting beauty . . . directs attention to the merchandise shown.

Your nearby L·O·F Glass Distributor will show you over 20 patterns in Blue Ridge Glass. Used alone or in combination, these give you wide choice in designing interiors that make better selling displays for all types of merchandise.



Satinol Flutex doors conceal extra stock and create a decorative panel of light in glassware department at T. A. Chapman Company, Milwaukee.

For Ideas... write for our *Patterned Glass Modernization Book*, illustrated with photographs of actual installations in stores, offices, buildings of many types. Blue Ridge Sales Division, Libbey·Owens·Ford Glass Co., 10117A Nicholas Building, Toledo 3, Ohio.

BLUE RIDGE Patterned GLASS

FOR SOFT, DIFFUSED LIGHT • SMART DECORATION • COMPLETE PRIVACY

A survey taken among workers in 400 manufacturing plants showed that good washrooms are one of the four most important factors in good working conditions.

"There's no excuse for a sloppy washroom!"

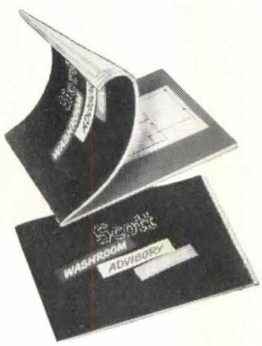
RALPH: *"You can tell a lot about a company by the way they look after the employees' washrooms. Our management here sure knows how much we appreciate a nice place to clean up in."*

WYNN: *"You bet—a good clean washroom—equipped right—doesn't cost a lot of money but it surely makes a big difference!"*

EMPLOYEES judge a company a great deal by its washrooms. In a survey of men and women workers at more than 400 plants, they named these factors as the ones they considered most important in good working conditions: *good washrooms*, *adequate lighting*, *safety devices* and *proper ventilation*.

Besides helping morale, sanitary, well-equipped washrooms, with plenty of soap, hot water and good quality individual tissue towels, help reduce the number of absences due to colds and their complications. For they encourage frequent and thorough washing that helps prevent germs from spreading.

Haven't you yourself been irritated by a neglected washroom? Then check up . . . make sure your washrooms are "Health Zones," not "Germ Exchanges"—"morale-boosters," not "temper-testers."



NEW FREE BOOKLET
Helps plan better washrooms

Send for your free copy—illustrated with floor plans and details—issued by Scott "Washroom Advisory Service." A partial list of contents: Planning for Personal Services; Controlled Traffic Flow; Plant Locker and Washrooms; School Washrooms; Recreation Rooms; Fixture Locations; etc. Write Washroom Advisory Service, Dept. G, Scott Paper Co., Chester, Pa.

SCOTTISSUE TOWELS
Largest selling tissue towels in America!

Thirsty Fibre REG. U. S. PAT. OFF.

Trade Marks "ScotTissue," "Washroom Advisory Service," "Duralose" Reg. U. S. Pat. Off.

Best

For Decorating
For Weather Sealing
For Concrete, Stucco, and Masonry
For Exteriors
For Interiors

27 years of successful use prove its quality

● Down through the years, leading architects have specified Medusa Portland Cement Paint for all concrete, stucco, and masonry surfaces. They know that Medusa Paint gives the results they want—long lasting beauty, permanent colors, and complete weather sealing. Time—27 years—has proved that the architects are right. Medusa Paint *is* best. It is the easy way to assure long lasting beauty and weather sealing at lowest cost.

And there are good reasons for it. One important reason is the fact that Medusa Paint is manufactured by a cement company. All the research facilities—the specialization—for the development of better cements, have been applied to this paint. This has led to the best paint possible—one that really sticks to concrete, stucco, and masonry surfaces—one that assures long lasting client satisfaction every time.

You can give your buildings more individuality by specifying Medusa Paint in any one of its ten attractive colors. Each gives long lasting beauty—each is equally effective on *exteriors or interiors.* Why take a chance? Choose the paint that time has proved best. Specify Medusa Portland Cement Paint for exterior and interior—above or below grade.

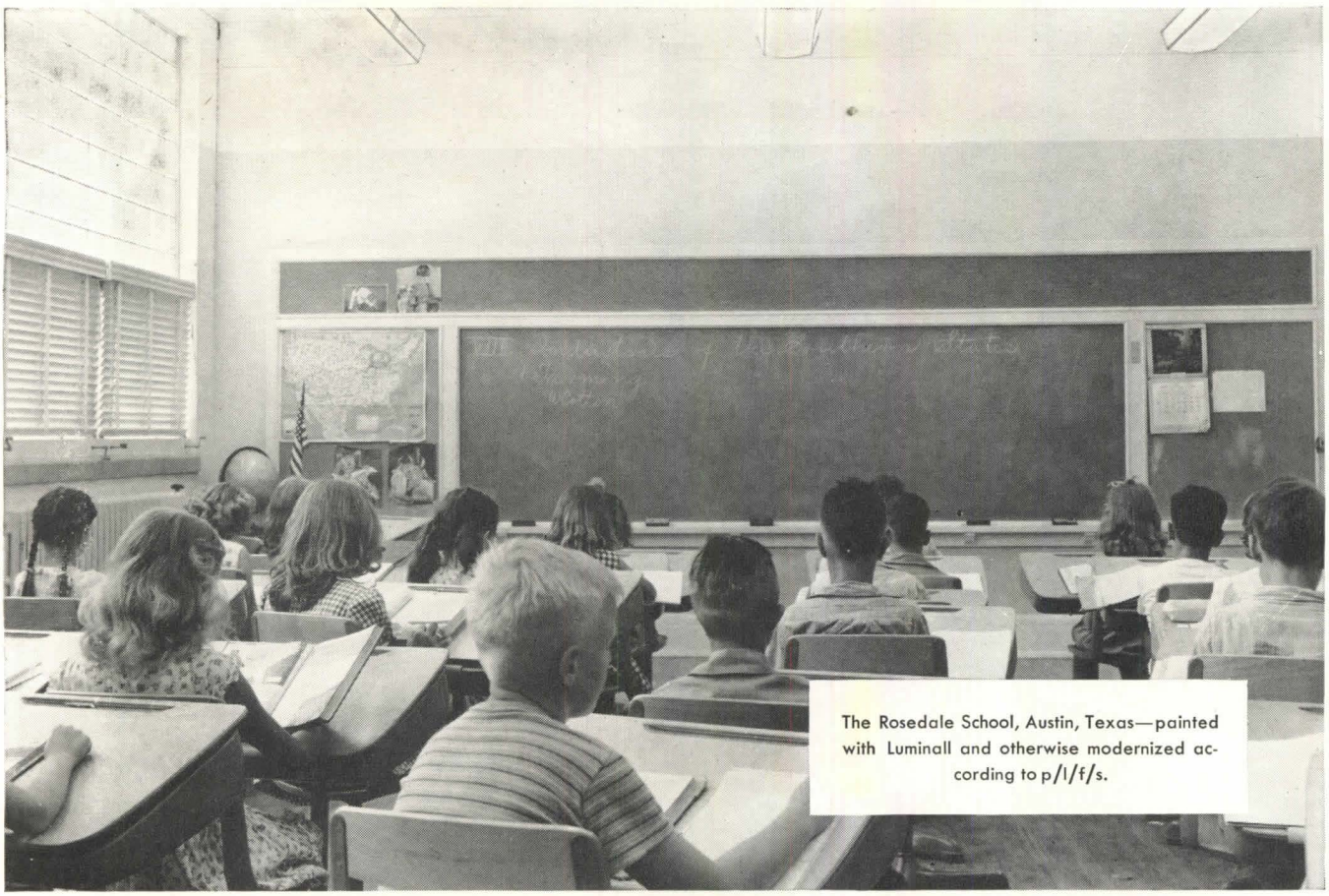
Send coupon for your free copy of "Painting Concrete, Stucco, and Masonry." It gives you complete details...tells you how to seal and decorate concrete, stucco, and masonry—the easy, long lasting way.

M E D U S A
PRODUCTS DIVISION
of MEDUSA PORTLAND CEMENT COMPANY
1004 Midland Building, Dept. "K", Cleveland 15, Ohio

Gentlemen: Please send me free copy of the booklet, "Painting Concrete, Stucco, and Masonry."

Name .....
Address .....
City ..... *State* .....

Also made by Medusa Products Company of Canada, Ltd., Paris, Ontario.



The Rosedale School, Austin, Texas—painted with Luminall and otherwise modernized according to p/l/f/s.

The Advantages of LUMINALL PAINT in the Harmon Technique

For convenience, p/l/f/s is used as an abbreviation of "painting, lighting, fenestration and seating as coordinated according to the Dr. Darell B. Harmon Technique."

When schoolrooms are modernized according to this technique, a profound improvement is noted in the educational progress of students as well as improvements in their physical well-being. The cost of p/l/f/s modernizing an old schoolroom has been as low as $40 in some areas. This type of modernization is applicable to many factories, workrooms and offices.

Luminall paint is ideal for painting walls and ceilings in a p/l/f/s job. It is highly light-reflective—up to 90.6% for white. It maintains this reflectivity because it does not "yellow" or discolor from age and exposure. It diffuses reflected light thoroughly. Luminall paint was used in the Mexia, Texas, Rosedale (Austin, Texas) schools which played such an important part in the development and testing of p/l/f/s.

Ask for a copy of Dr. Harmon's "LIGHT ON GROWING CHILDREN," reprinted from Architectural Record. On receipt of sketches showing dimensions and details of schoolroom, specifications will be furnished according to the Harmon Technique without cost or obligation. NATIONAL CHEMICAL & MFG. CO., 3617 S. May Street, Chicago 9.

Use Luminall to Save Time

Use Luminall paint for finishing new work or remodeling jobs. You can apply it over damp plaster without damage to either plaster or decorating. Lets you deliver a complete job sooner. Luminall is a Casein base paint. Thins with water. Sold by more than 3000 leading paint merchants.

"UM"NAL"

the light-reflective paint for interiors

Ernest J. Kump designs an air terminal

Mesker Steel Windows

"When faced with the problem of bringing the outdoors into a building, I am always grateful for the slender, sturdy mullions of steel windows."

Architect
Ernest J. Kump
Franklin, Kump & Falk
San Francisco, Calif.

your copy of the Mesker Book of Windows for Public Buildings, to Mesker Brothers, 4340 Geraldine, Saint Louis 15, Missouri

No more gambling in boiler selection NOW you can get a FITZGIBBONS

NOW YOU CAN BE SURE you're getting a steel boiler whose construction is in rigid accordance with the standards set by the American Society of Mechanical Engineers.

Look for the **A.S.M.E. stamp** — you'll find it on Fitzgibbons Steel Boilers.

NOW YOU CAN BE SURE your steel boiler has been inspected and hydrostatically tested to insure A.S.M.E. code conformance.

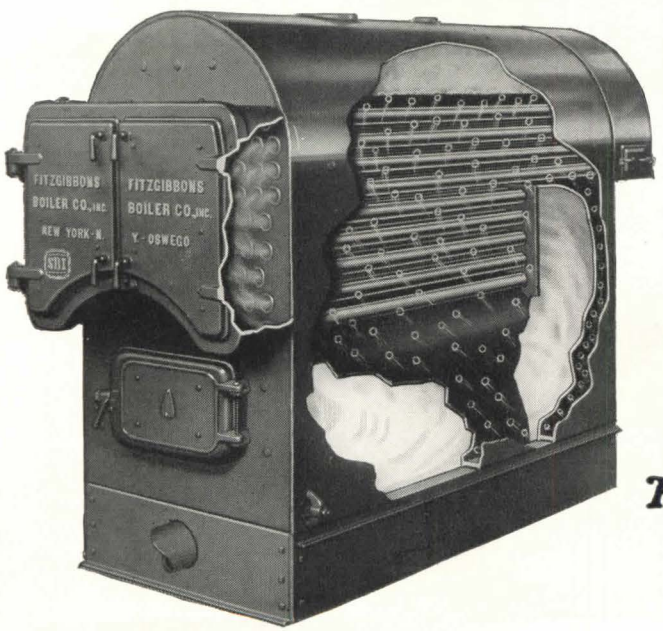
See the **"Hartford" inspector's mark** on your Fitzgibbons boiler — your guarantee that he has passed it.

NOW YOU CAN BE SURE the boiler is honestly rated, and will perform right up to or beyond its given capacity.

Look for the **Symbol of the Steel Boiler Institute** — on the boiler.

***LASTLY*, NOW YOU CAN BE SURE** that the design of your boiler is free of untried and impractical quirks, and is based on sound, proven principles.

Look for the **Fitzgibbons trademark**, an emblem mark of 61 continuous and successful years of steel boiler building.



FITZGIBBONS "D" TYPE

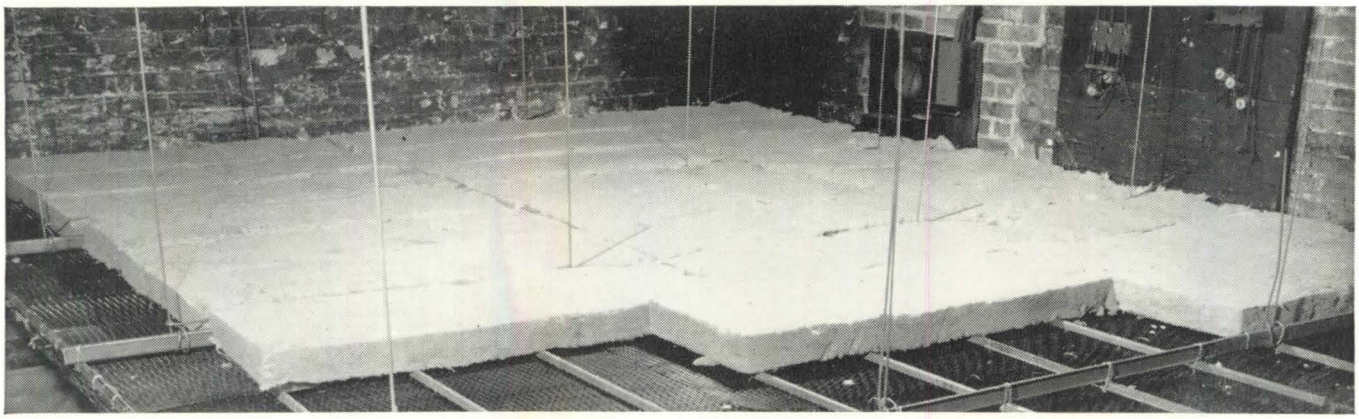
This is the boiler that is being selected for so many heating jobs in buildings everywhere from a moderate sized apartment to a large institutional building. Built in types for oil, gas, stoker and hand firing in sizes up to 42,500 sq. ft. steam. It has every fine quality that Fitzgibbons has developed in 61 years of knowing how. "D" Type Catalog on request.

Fitzgibbons Boiler Company, Inc.
101 PARK AVENUE, NEW YORK 17, N. Y.
Manufactured at: OSWEGO, N. Y.
Sales Branches in Principal Cities

FITZGIBBONS

THE BOILER THAT'S STAMPED "STERLING" FOUR WAYS

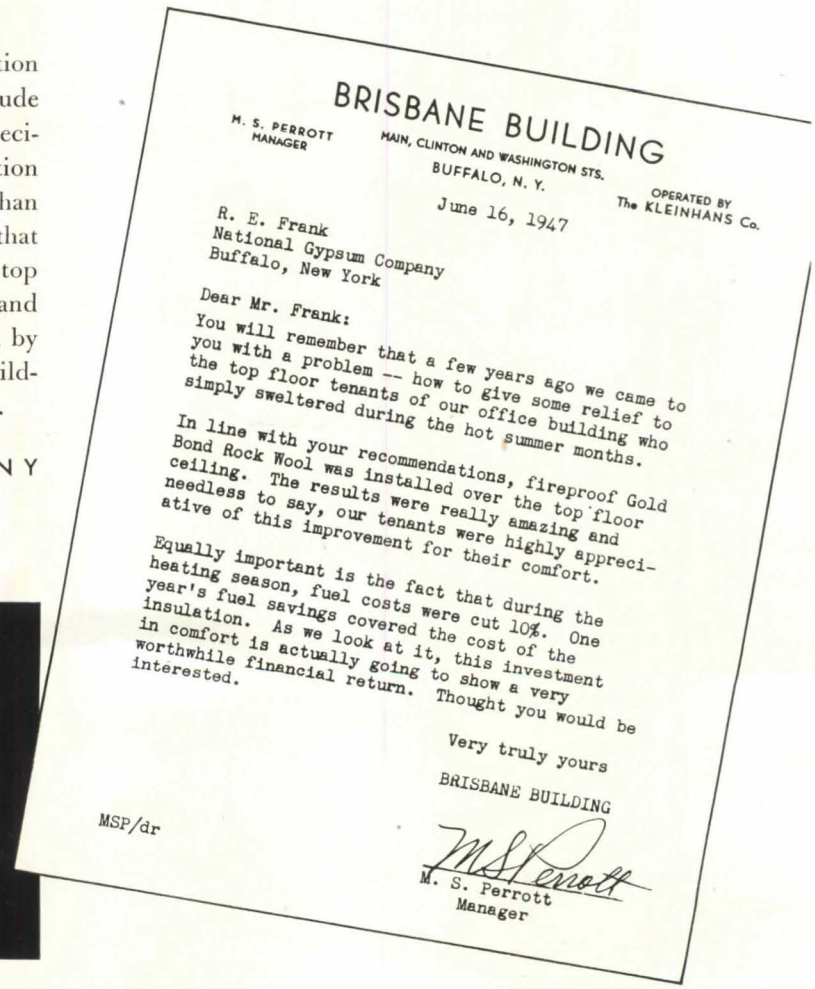
If you specify Gold Bond Rock Wool Batts...



you can look forward to results like this...

NEXT time you plan commercial construction (office buildings, apartments, theatres) include Gold Bond Rock Wool batts in your ceiling specifications. Your client will be assured of insulation that is *permanently* fireproof—at no more cost than for merely "fire-retardant" materials. Insulation that will cut his heating costs in winter, and keep the top floor cool in summer. Insulation that both you and your client can depend on because it's backed by one of the country's largest manufacturer's of building materials. Detailed specifications on request.

NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK



BRISBANE BUILDING

M. S. PERROTT
MANAGER

MAIN, CLINTON AND WASHINGTON STS.
BUFFALO, N. Y.

OPERATED BY
The KLEINHANS Co.

June 16, 1947

R. E. Frank
National Gypsum Company
Buffalo, New York

Dear Mr. Frank:

You will remember that a few years ago we came to you with a problem -- how to give some relief to the top floor tenants of our office building who simply sweltered during the hot summer months.

In line with your recommendations, fireproof Gold Bond Rock Wool was installed over the top floor ceiling. The results were really amazing and needless to say, our tenants were highly appreciative of this improvement for their comfort.

Equally important is the fact that during the heating season, fuel costs were cut 10%. One year's fuel savings covered the cost of the insulation. As we look at it, this investment in comfort is actually going to show a very worthwhile financial return. Thought you would be interested.

Very truly yours

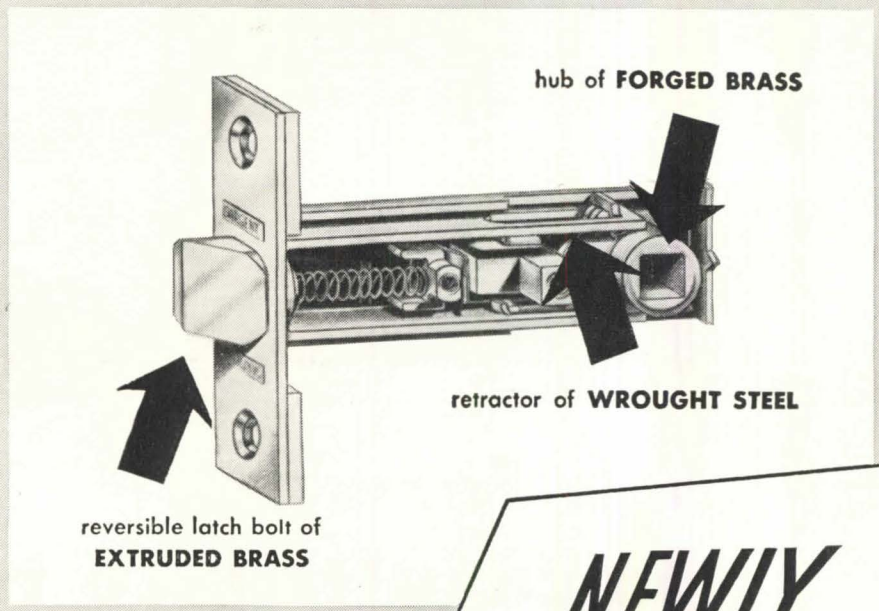
BRISBANE BUILDING

MSP/dr

M. S. Perrott
Manager

You'll build or remodel better with Gold Bond

Over 150 Gold Bond Products including gypsum lath, plaster, lime, wallboards, gypsum sheathing, rock wool insulation, metal lath products and partition systems, wall paint and acoustical materials.



NEWLY IMPROVED!

SARGENT BORED-IN LOCK WITH AUTO-RELEASE

Sargent now offers you a complete line of Bored-In Lock and Latch Sets in a variety of trim that will take care of your full requirements.

MADE FROM STRONGEST MATERIALS—During the war it was necessary to use substitute materials in Sargent Bored-In Locks. Now that is ended. As you will see in the illustration above, all essential parts of the *new* Sargent Bored-In Locks are made of the finest, strongest materials: extruded brass for latch bolts, forged brass for hubs, wrought steel for retractors.

REVERSIBLE — Every Sargent Bored-In Lock or Latch Set will fit either right or left hand doors. On locks the latch bolt heads may be revolved for use on reverse bevel doors.

AUTO-RELEASE FEATURE — Every Sargent Bored-In Lock provides the convenience of automatic release. This distinctive Sargent feature releases the locking mechanism whenever the latch bolt is retracted either by a turn of the inside knob or as the latch bolt head slides across the strike.

QUICKLY INSTALLED . . . Installation is quick and economical because both holes are bored with one size bit. Use of Sargent Boring Jig assures perfect alignment.

COMPLETE LINE — The complete line of Sargent Bored-In Locks and Latches includes sets with Regular Shank Knobs, French Shank Knobs and Glass Knobs in brass trim; also available with Regular Shank Knobs in steel trim. For complete specifications and prices, write to Sargent & Company, Water Street, New Haven, Conn.

Sargent Bored-In Lock and Latch Sets Are Available for Prompt Delivery

SARGENT & COMPANY

NEW YORK • NEW HAVEN, CONN. • CHICAGO

SARGENT
REG. U.S. PAT. OFF.

The PLANNING BOARD

The Truscon Planning Board Says: "Normal delivery on many of our Steel Building Products is now possible. In fact, on all material for which raw material is readily available, a normal rate of production and delivery is currently in effect." However, since production and delivery schedules change from week to week, we suggest you contact the nearest Truscon Sales office for the latest information.

More Light and Air for the Lynmore Apartments

Thanks to the generous use of Truscon Series 138 Double-Hung Steel Windows, and the large glass areas of these modern units, the occupants of the Lynmore Apartments amply utilize nature's free sunshine and fresh air. And protection against insects during the summer is assured by Truscon Metal Screens.

The trim, slim lines of Truscon Residential Double-Hung Windows produce a clean cut modern effect that adds distinction to any building. Moreover, their beauty is permanent, because these windows are made of STEEL. Truscon Double-Hung Steel Windows cost no more to buy and install than ordinary windows. Completely factory assembled and delivered ready for installation, their cost will fit the budgets of the most modestly priced homes. They can be economically installed. And, surprising as it may seem, they actually cost LESS when all contributing cost factors are accurately computed. Combination screen and storm sash units are available at reasonable prices. Write for complete details on Truscon Double-Hung Steel Windows.

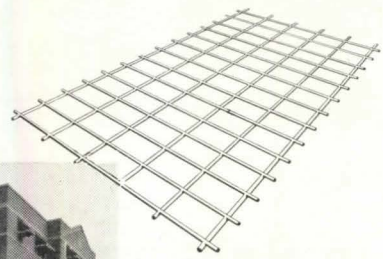
The structural strength of the Lynmore Apartments is adequately protected by Truscon Concrete Reinforcing Bars, used in conjunction with Truscon Welded Steel Fabric.

Truscon Steel Bars for reinforcing are applicable to a wide range of concrete work, such as concrete slabs, beams and girders, columns, walls and footings; in the construction of buildings, bridges, tanks, and all other concrete structures subject to tension and compression stresses.

These concrete reinforcing bars are special rolled sections of high grade steel, with a series of longitudinal and diagonal ribs so designed as to provide the maximum bond with the surrounding concrete. Write for details of Truscon Reinforcing Bars.

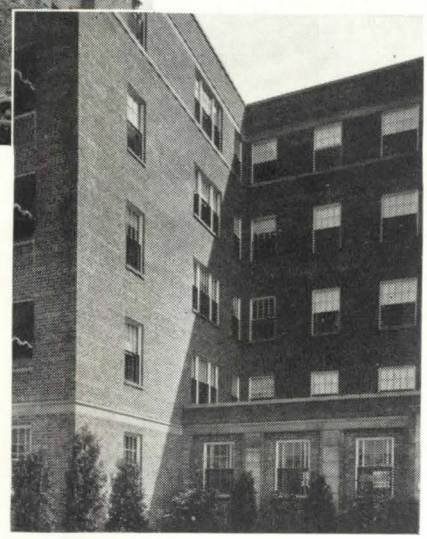
Truscon Reinforcing Bar

Truscon Welded Steel Fabric is widely used in all types of architectural structures, roads, driveways, airport landing fields, and wherever large areas of concrete must be given internal protection against cracking, heaving, etc. Write for details.

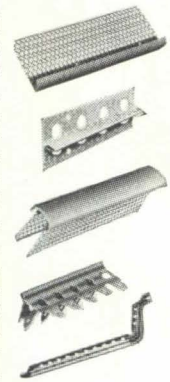


Truscon Welded Steel Fabric as used in the Lynmore Apartments.

The Lynmore Apartments, Shaker Heights, Ohio. Architect—J. L. Weinberg. Contractor—William Dolin Construction Company.



Metal Lath Accessories



Truscon now is equipped to furnish Bull Nose and Scalloped Edge Corner Beads, Special Base Grounds and Screeds, Picture Mold, Casings, Fittings and other plastering accessory items. These complement the well-known Truscon line of Metal Lath, Stucco Mesh, Corner Reinforcements, Hollow Partition Studs, Cold Rolled Channels and other products related to the plastering trades. All Truscon Metal Lath Products are manufactured in accordance with U. S. Department of Commerce Simplified Practice Recommendation R-344.

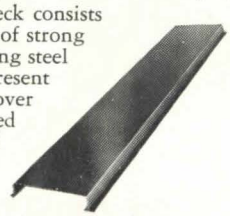
Write for free catalog showing the complete line of Truscon Metal Lath and Accessories, or refer to SWEET'S.

Truscon Pioneered Development of Rib Metal Lath

In 1907 Truscon designed and developed a Hy-Rib Lath to meet the need for an economical and incombustible plaster base that would be rigid enough to permit wide spacing of supports of walls and ceilings. This permitted greater speed of erection and faster application of lath. Hy-Rib thus became the forerunner of flat rib lath, developed in 1909, and the present complete line of Metal Lath Products and Accessories now manufactured by Truscon.

Cuts Roof Costs

If you have a flat, pitched or curved roof on which to put an economical permanent deck, Truscon "Ferrobord" Steeldeck permits you to meet all the requirements of such a job.



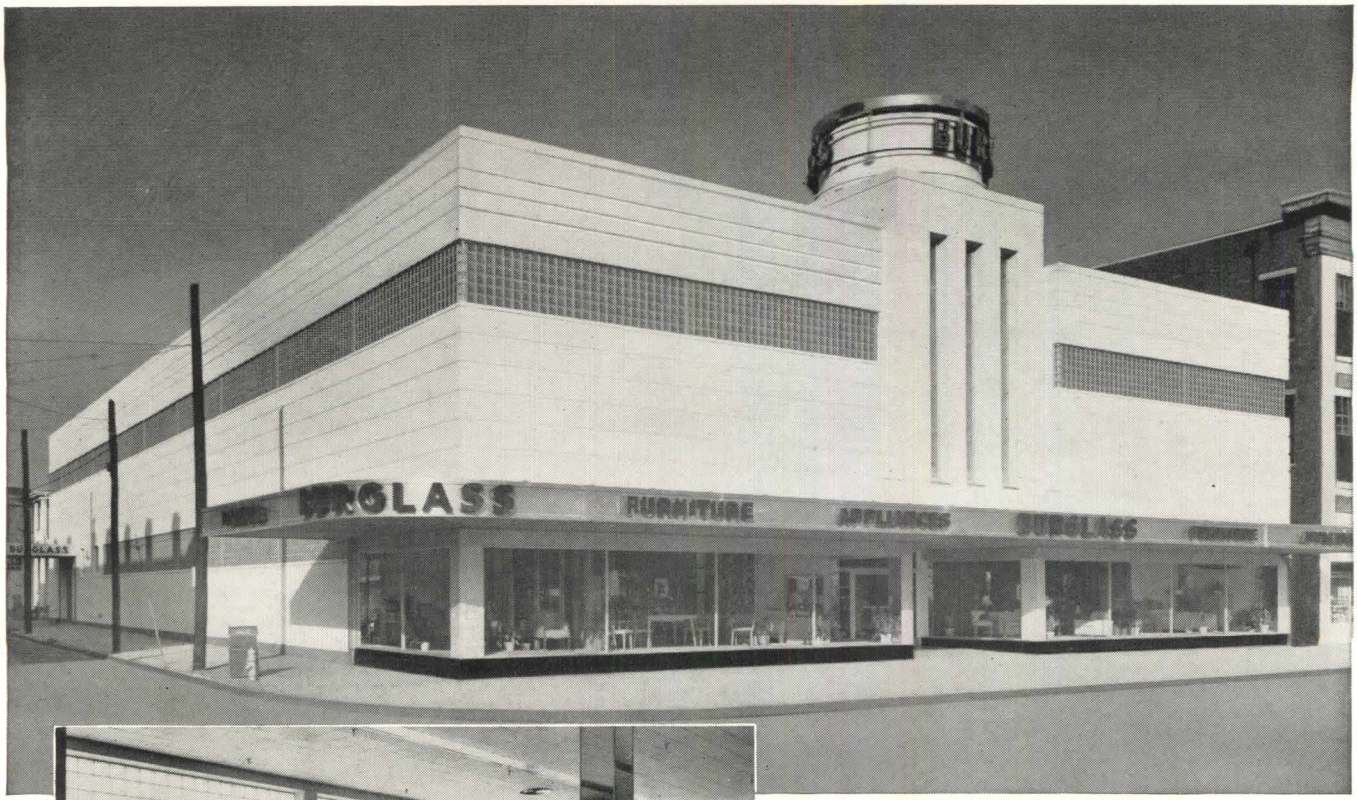
"Ferrobord" Steeldeck consists of a parallel system of strong structural interlocking steel members, which present a smooth surface over which can be applied built-up roofing of any type, with or without insulation. "Ferrobord" is made from both 20-gauge and 18-gauge cooper-bearing strip steel, having an ultimate strength of not less than 50,000 lbs. per square inch. Each unit is 6 inches wide and has a depth of either 1½ or 1¾ inches.

The Truscon Steel Company will be glad to cooperate with local roof companies in selecting the proper type of insulation and built-up roofing to meet certain definite requirements of structures.

New Literature

A 34-page catalog on Truscon Residential Double-Hung and Casement Windows. Complete with all details. Write for free copy.

TRUSCON STEEL COMPANY
YOUNGSTOWN 1, OHIO
Subsidiary of Republic Steel Corporation



Burglass Furniture Company's store in New Orleans uses Insulux Glass Block panels to help block out dirt. Architect: Rathbone de Buys, New Orleans, La.

←

Second floor of Burglass Furniture store uses Insulux to flood interior display area with daylight. The No. 351 Insulux pattern used was designed specially to direct light upwards to the ceiling. From there it is re-directed deeper into the room, thus giving better light with fewer shadows. Contractors: Perrilliat-Rickey Construction Co., New Orleans, La.

Something new in lighting . . . for old New Orleans

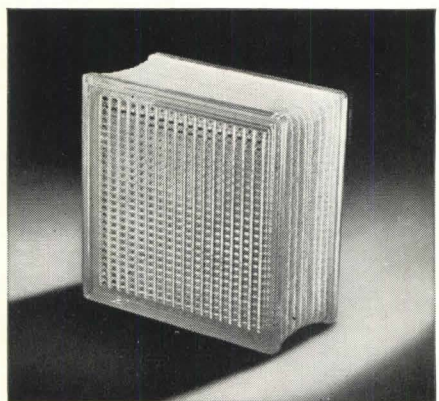
Brand-spanking new! It's the Burglass Furniture Company's modern, cheerful store . . . new from top to bottom! Daylighted by Insulux Glass Block, of course.

Continuous panels of light-transmitting Insulux on both floors add a note of gracefulness and style to the functionally designed building. They increase customer appeal, improve displays and lower the cost of maintenance.

In keeping with modern design trends, Insulux allows complete flexibility and originality in architectural planning and execution. It's ideal for adding light to dark corners, diffusing daylight over wider areas and promoting privacy.

Specified by many architects for residences, apartments and commercial establishments, Insulux Glass Block is installed in a manner similar to brick. Once in place, Insulux panels are permanent, high in insulating qualities and easily cleaned. There's nothing to rot, rust or corrode.

For complete technical data, specifications and installation details, see the "Glass" section of Sweet's Architectural Catalog, or write Dept. D-35, Owens-Illinois Glass Company, Insulux Products Division, Toledo 1, Ohio.



OWENS-ILLINOIS

INSULUX

GLASS BLOCK

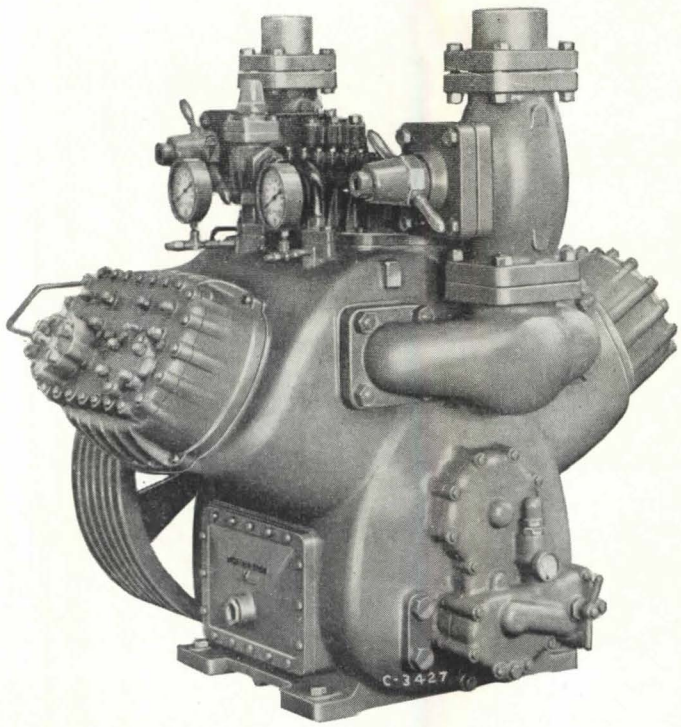
Insulux Glass Block is made in three sizes and many attractive face patterns. Investigate this modern material that has solved many complex building problems. Ask about Insulux today!

WORTHINGTON

Air Conditioning and Refrigeration Report

Worthington Pump and Machinery Corporation, Harrison, New Jersey

WORTHINGTON FREON-12 COMPRESSORS COMBINE COST-SAVING INSTALLATION AND OPERATION



Pleasingly streamlined, the new Worthington Freon-12 Compressors are sturdy but light, compact but easily accessible, unusually quiet and efficient in action. And their low initial price is joined by minimum operating costs over a long service life.

Features for Better Performance

Automatic capacity control . . . scientific balancing of moving elements . . . large crankcases and positive lubrication . . . lightweight, automotive-type pistons . . . Worthington Feather* Valves — quietest, simplest, most efficient ever made.

Self-Contained Units

Worthington Freon-12 Compressors, from 3 to 125 hp, are also available in self-contained compressor and condenser units, with Worthington Multi-V-Drives, special motors and safety controls, for economical installation and maintenance in all types of air conditioning and refrigeration service. *Worthington Pump and Machinery Corporation, Harrison, New Jersey. Specialists in air conditioning and refrigeration for more than 50 years.*

*Reg. U. S. Pat. Off.

A7-7

WORTHINGTON *Air Conditioning and Refrigeration*

"They're Freezing Down South . . . with Worthington Refrigeration"

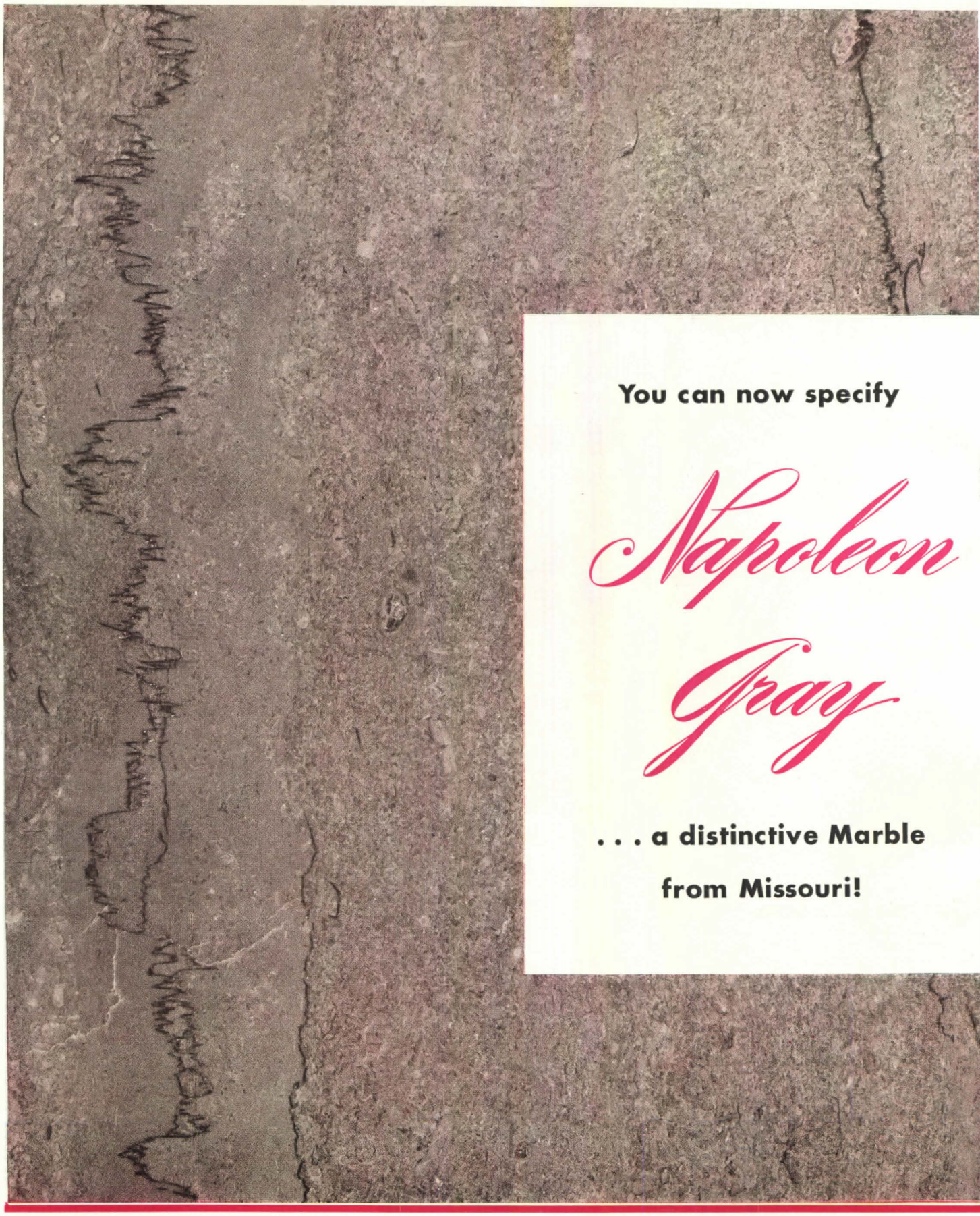
In addition to 2,000 lockers the new, ultra-modern Lawson Frozen Food Locker Plant in Columbia, S. C., has a large glass-type freezer room and rooms for processing and storing salt meats and poultry. Other features are a smoke house, offices and display space. In the basement a zero degree F. room is being built for bulk and job lot storage.

Lockers in the Lawson plant are kept at 38F. Temperatures for these and other refrigerated rooms, ranging down to minus 3F. are maintained by Worthington equipment. This includes five 5x5 VSA ammonia remote-type units, one 4HF ammonia booster, together with an evaporative condenser, subcooler and oil separating equipment, etc. — all supplied through the Palmetto Air Conditioning and Refrigeration Co.

Mammy's Shanty, famous restaurant in Atlanta, Ga., is Worthington-equipped with a low-temperature refrigeration system handling: a sharp freezer room; a zero degree F. general storage room; and a 34F. meat storage room. This efficient, economical installation consists of two air-cooled units, Freon-12, of 1½ and 2 hp, respectively. Mr. Allen Stewart, owner, writes: "*We can heartily recommend your equipment.*"

Another Reason Why
There's More Worth in Worthington

Making more of the "inner vitals" — compressors, condensers, turbines, pumps, valves, fittings — Worthington is better able to give you a completely *integrated* air conditioning or refrigeration system. See your nearby Worthington Distributor for details.



You can now specify

Napoleon Gray

. . . a distinctive Marble from Missouri!

VERMONT MARBLE

Application of Napoleon Gray Marble in lobby of Commercial National Bank, Shreveport, Louisiana. McKimm, Mead & White, New York City, Architects. James Stuart & Co., New York City, Contractors.

The Marble Industry, having been affected by the same difficulties that have hampered the whole construction field, is at least keeping pace with the field, with fair prospects of competing for the lead.

An important factor in its development will be the increasing production of Napoleon Gray Marble from Missouri. Long known for its warmth of color, uniformity of texture, and the adaptability of its neutral tone and marking to both decorative and sanitary purposes, Napoleon Gray Marble is also recognized for the superiority of the surface-finish put upon it.

Although we import all the popular varieties of marble from Europe, and produce a wide range of marble, including the lightest to the darkest of colors, in our Vermont quarries, there seems to be a definite need for just the additional type of marble found in the Napoleon Gray product. We have therefore undertaken to bring it to a high state of production.

Napoleon Gray Marble is now available in quantity and in sizes for wainscot, toilet and shower partitions, trim of openings and all sorts of floor treatment. It is being finished at our plants in Proctor, Vermont; Remington, Indiana; Dallas, Texas; San Francisco, California; Peterboro, Ontario. And also by many of the other marble companies who are buying blocks and sawn slabs for their own fabrication. Specify "Napoleon Gray Marble."

* * *

Other notable examples of institutions in which Napoleon Gray interior marble has proved its worth:

Missouri State Capitol, *Jefferson City, Mo.*
Mechanics Institute, *Montreal, Canada*
Standard Oil Company, *Baltimore, Md.*
Technical High School, *Omaha, Neb.*
American Tel. & Tel., *New York, N. Y.*
Standard Arcade, *New York, N. Y.*
Masonic Temple, *Omaha, Neb.*
St. Thomas Aquinas Church, *Chicago, Ill.*
Union Gas Company, *Brooklyn, N. Y.*
Union Station, *Toronto, Canada*
Roosevelt High School, *St. Louis, Mo.*
Bank of America, *New York, N. Y.*
First National Bank, *South Amboy, N. J.*
Packard Building, *Philadelphia, Pa.*
National State Bank, *Elizabeth, N. J.*
National Bank of Commerce, *Tulsa, Oklahoma*
Commercial National Bank, *Shreveport, La.*

Specify "Napoleon Gray Marble"

VERMONT MARBLE COMPANY • PROCTOR, VERMONT

Branch Offices:

Boston • Chicago • Cleveland • Dallas • Houston • Los Angeles • New York • Philadelphia • San Francisco

Ontario Marble Co., Peterboro, Ont.

20 Years HOLDING UP A MOUNTAIN IN 'INCOR' CONCRETE GOOD AS NEW

THE DENVER AND RIO GRANDE WESTERN RAILROAD CO.

DENVER 1, COLORADO

A. E. PERLMAN
CHIEF ENGINEER

June 28, 1947

Dear Mr Hummel

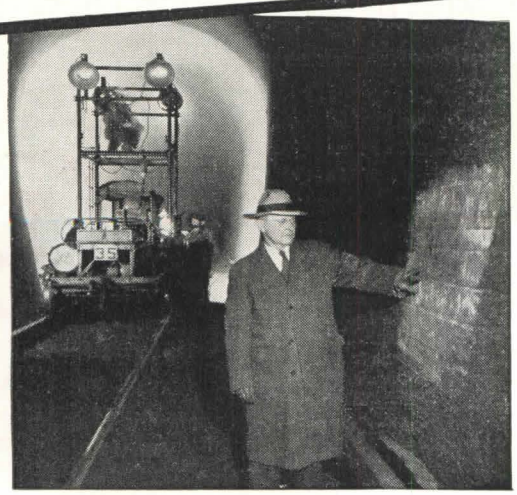
I have on my desk an inspection report on the concrete sections in the Moffat Tunnel from Mr Glen Turner, our Division Engineer on the Moffat Division Mr Turner reports as follows

"Made a complete inspection of the Incor cement sections of the Moffat Tunnel and find these sections, which were placed in the Tunnel twenty years ago, to be in excellent condition. Despite the tremendous pressures to which these sections are subject, there is absolutely no evidence of structural failure or disintegration The concrete appeared very hard and rang true when struck with a pick "

I know you will be happy to have this information, and I can assure you we are very well pleased with the performance of your Incor cement in the Moffat Tunnel

Very truly yours,

Mr R A Hummel, President
Lone Star Cement Corporation
342 Madison Avenue
New York, N Y



Letter, above, tells of outstanding 'Incor' performance in Moffat Tunnel. Right. Glen Turner, Division Engineer, Denver & Rio Grande, examining 20-year-old 'Incor' concrete—holding up a mountain, blocking off ground waters—a generation of service and not a dollar for maintenance.

A NEW ERA IN CONCRETE BEGAN

TWENTY years ago, the Moffat Tunnel was being driven six miles through the Rockies. Masses of soft rock and earth, sagging under the Mountain's weight — pressures up to 10 tons per sq. ft. — had to be held in check. Ordinary concrete hardened too slowly . . . concrete that gained strength, *fast and sure,* was needed and needed badly.

Years before, anticipating the needs of construction progress, Lone Star Cement technicians began rearranging the chemical structure of Portland cement. And so it was that 'Incor', America's FIRST high early strength Portland cement, was available — and on time. 'Incor' concrete withstood the almost fabulous pressures . . . held up the mountain . . . has been holding it up ever since . . . not a dollar for maintenance.

Just how well has 'Incor' performed through the years? A 20-year Condition Survey has just been completed. Chief Engineer Perlman's letter — "despite the tremendous pressures, there is absolutely no evidence of structural failure"—keynotes a report of *outstanding 'Incor' performance across the entire range of construction.*

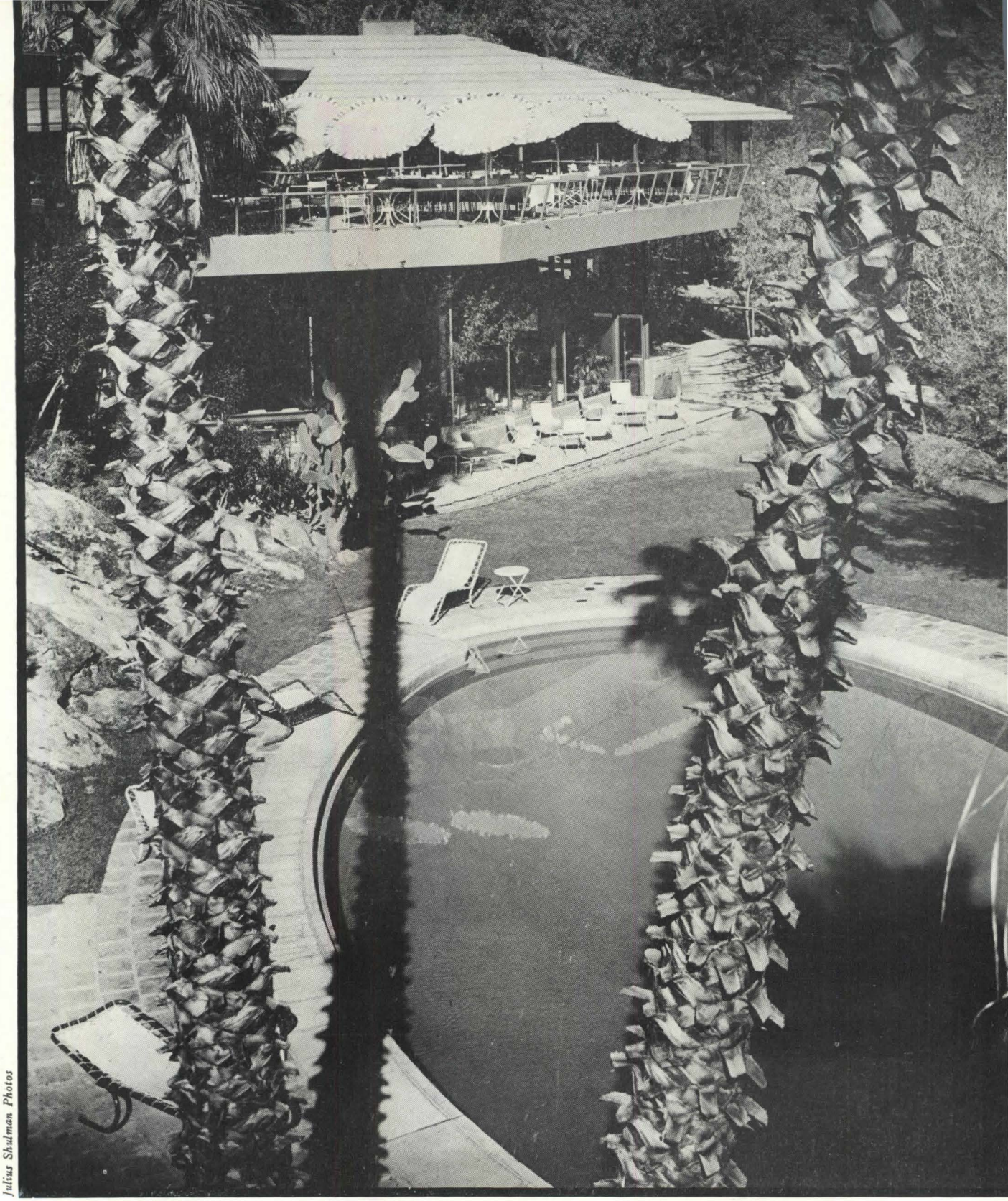
A new era in concrete began 20 years ago at Moffat Tunnel. Dependable 'Incor'* high early strength that held up a mountain then, holds down construction costs now. Today, more than ever, this is the 'INCOR' ERA.

*Reg. U.S. Pat. Off.

LONE STAR CEMENT CORPORATION

Offices: ALBANY • BETHLEHEM, PA. • BIRMINGHAM • BOSTON • CHICAGO • DALLAS HOUSTON • INDIANAPOLIS • JACKSON, MISS. • KANSAS CITY, MO. • NEW ORLEANS NEW YORK • NORFOLK • PHILADELPHIA • ST. LOUIS • WASHINGTON, D. C.

LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST CEMENT PRODUCERS: 15 MODERN MILLS, 25,500,000 BARRELS ANNUAL CAPACITY



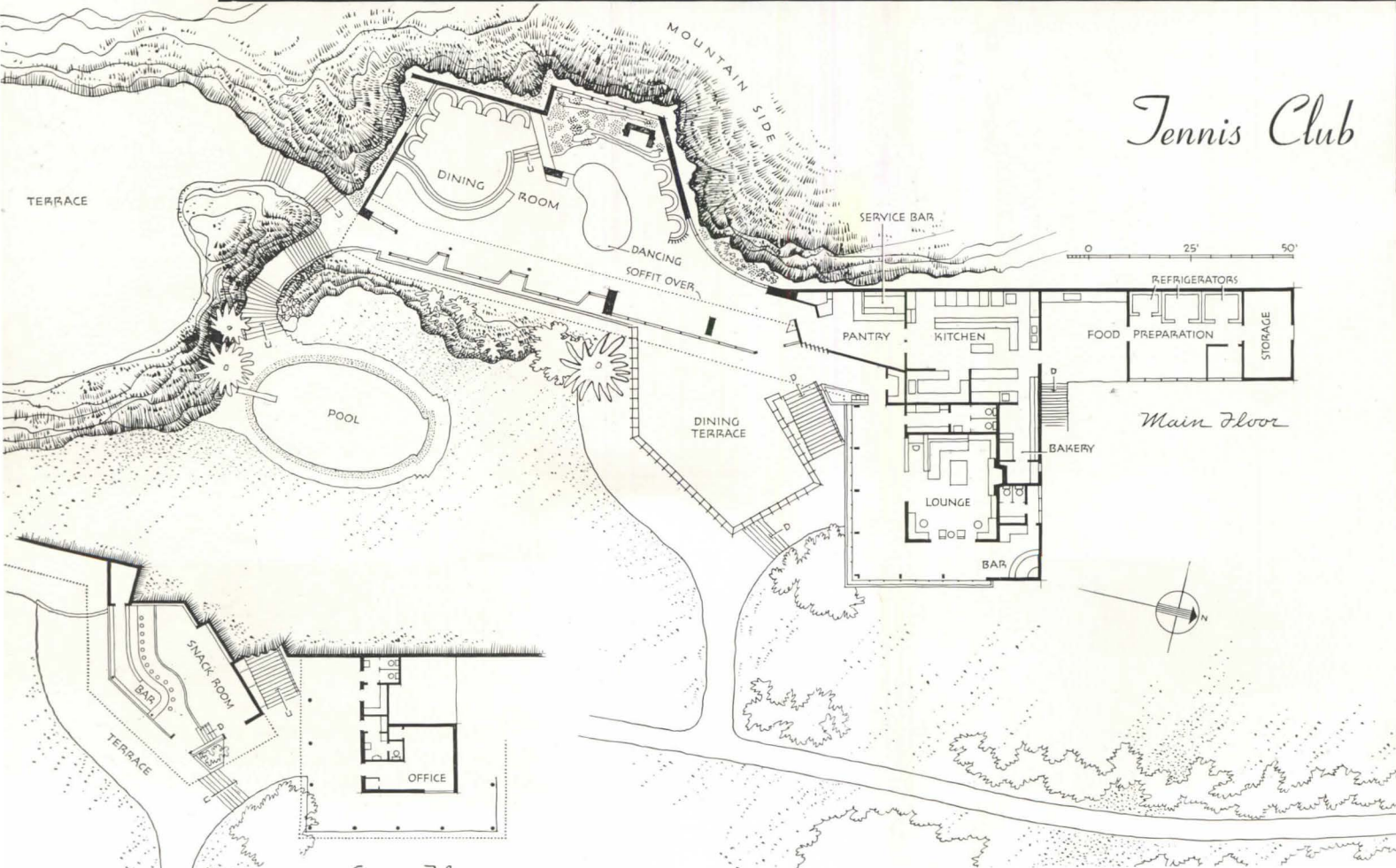
Julius Shulman Photos

Tennis Club, PALM SPRINGS, CALIFORNIA

PAUL R. WILLIAMS
A. QUINCY JONES, JR.
Architects

A pleasure dome of rare device, this sparkling club house is quite as much a product of its unique site as it is of the functional requirements. Literally built into a mountain of rock, it looks out to the east over a serene view of the colorful near-by community and the miles of desert valley beyond.

Tennis Club


MOUNTAIN SIDE
TERRACE
DINING ROOM
DANCING
SOFFIT OVER
SERVICE BAR
0
25'
50'
REFRIGERATORS
PANTRY
KITCHEN
FOOD PREPARATION
STORAGE
POOL
DINING TERRACE
BAKERY
LOUNGE
BAR
Main Floor
SNACK ROOM
BAR
TERRACE
OFFICE
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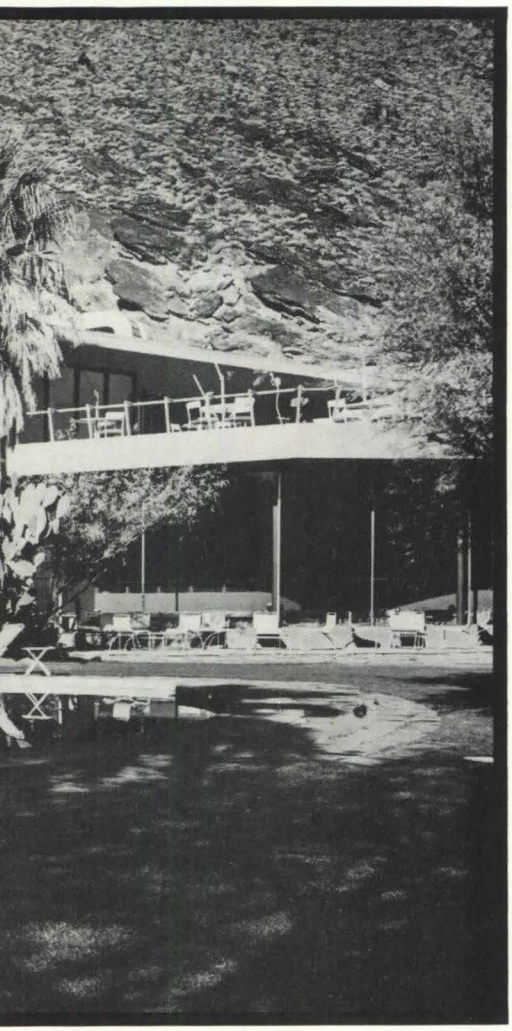


PALM SPRINGS, CALIFORNIA

PAUL R. WILLIAMS
A. QUINCY JONES, JR.
Architects

Rear walls of both the ground floor snack bar and the dining room above follow the contour of the rocky mountain at the back. The concrete structure is anchored into ledges blasted from the hillside. Further exploiting the dramatic site, windows on the rear walls of these rooms look directly onto the odd rock formation of the mountainside. Toward the valley view, almost continuous walls of glass are provided. The lounge and lanai are appropriately set apart from the activity rooms.

THE OUTDOOR DINING DECK (above) separates the dine-and-dance room from the quieter relaxation area provided in the lounge. Access to this main club floor is provided by both a stair at the right of the lower-level snack bar (below) and a stairway at the other end of the building leading up from the swimming pool (left of photo, facing page).

MAIN DINING ROOM. Note glass walls, and troughs with built-in light and conditioned-air sources.

RAISED CORNER of dining room. Vertical wood strips surface the wall. At right, fireplace wall, with mountain-view windows at left.

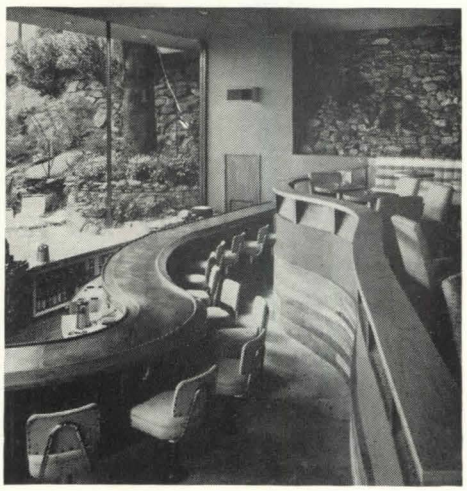
Tennis Club.

PALM SPRINGS, CALIFORNIA

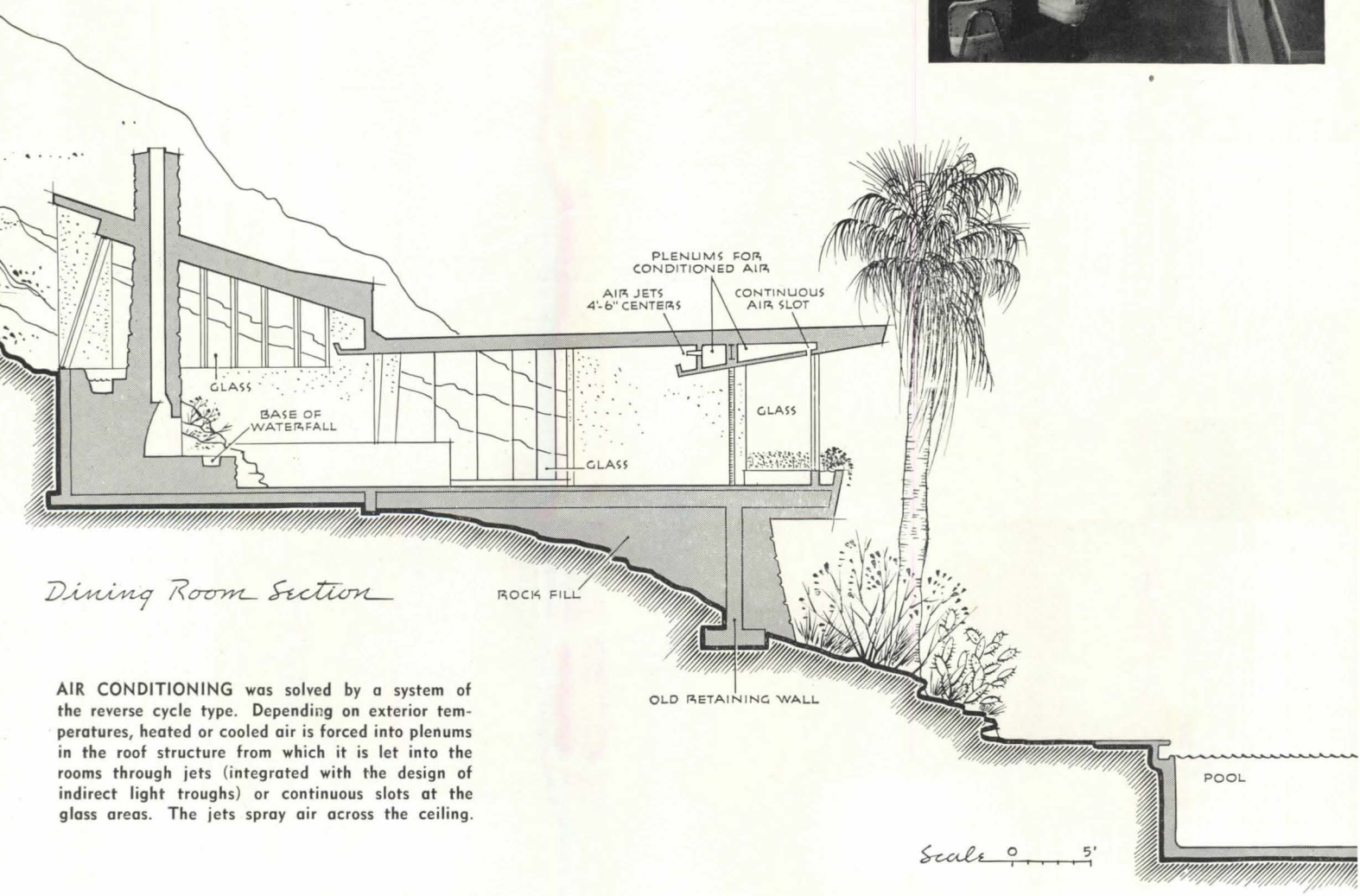
PAUL R. WILLIAMS and
A. QUINCY JONES, JR., Architects

Use of the large glass areas produced the "by-problem" of high heat transmission. Modern equipment and skillful architectural design were joined to solve this problem (see section below). In both structure and finish, natural materials such as stone and plain wood strips help integrate the out- and indoor relationship emphasized by the glass walls.

LOUNGE, looking toward lanai and dining deck beyond.



SNACK BAR, arranged on two levels, with full view of the pool and gardens.



Dining Room Section

AIR CONDITIONING was solved by a system of the reverse cycle type. Depending on exterior temperatures, heated or cooled air is forced into plenums in the roof structure from which it is let into the rooms through jets (integrated with the design of indirect light troughs) or continuous slots at the glass areas. The jets spray air across the ceiling.

Critique

HEALTH FACILITIES

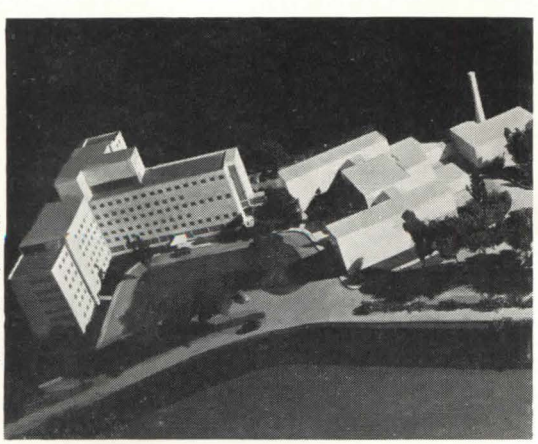
The term "health facility" covers a surprising number of types of buildings. While it obviously includes hospitals and offices for doctors, it goes way beyond these. In this Critique, for instance, the range extends from a huge metropolitan medical center to a rural health center. And in between these extremes are numerous special-purpose structures, new types of buildings, planned to serve new needs that have arisen from increased medical knowledge and improvements in health-care methods. Though complete coverage is impossible in a single issue of a magazine, there are included in the group at least two buildings for which (so far as we know) no precedent whatsoever exists—a county blood bank and an institute planned from scratch for the treatment of alcoholic patients.

To look over this diverse material and give us—and you—the benefit of their invaluable knowledge, we were fortunate to enlist the help of three distinguished experts in their fields—Addison Erdman, hospital specialist with the firm of Charles Butler, Robert D. Kohn, and Addison Erdman, Architects Associated, and co-author of the recent book, "Hospital Planning"; Dr. J. J. Golub, superintendent of the New York Hospital for Joint Diseases, former associate of Dr. S. S. Goldwater, and a well known hospital consultant; and Edward D. Stone, prominent New York architect whose contempory design work has been widely heralded.

Please notice that this is a critical analysis of several excellent buildings that serve one basic purpose—health care—rather than any attempt to conduct a survey of a single building type. As we see it, this is the appropriate function of a magazine. For a comprehensive study of a single building type—hospitals, for instance—the broader dimensions of a book are required. We have mentioned the one on which Mr. Erdman collaborated, published by F. W. Dodge. Another invaluable treatise is the recent "HOSPITALS—Integrated Design," by Isadore Rosenfield. Put out by Reinhold, it is Number 1 in our planned series of building-type books known as the PROGRESSIVE ARCHITECTURE LIBRARY.

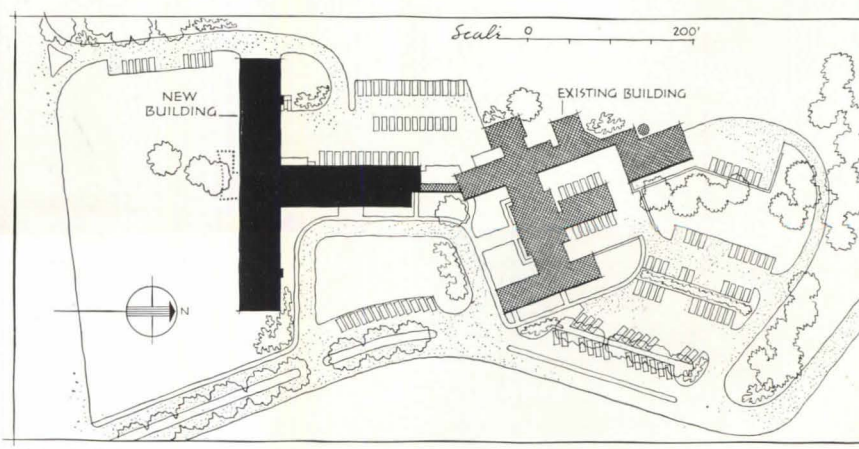
1 . . . GREENWICH HOSPITAL, GREENWICH, CONNECTICUT

SKIDMORE, OWINGS & MERRILL, Architects
CLAUDE W. MUNGER, M.D., Consultant

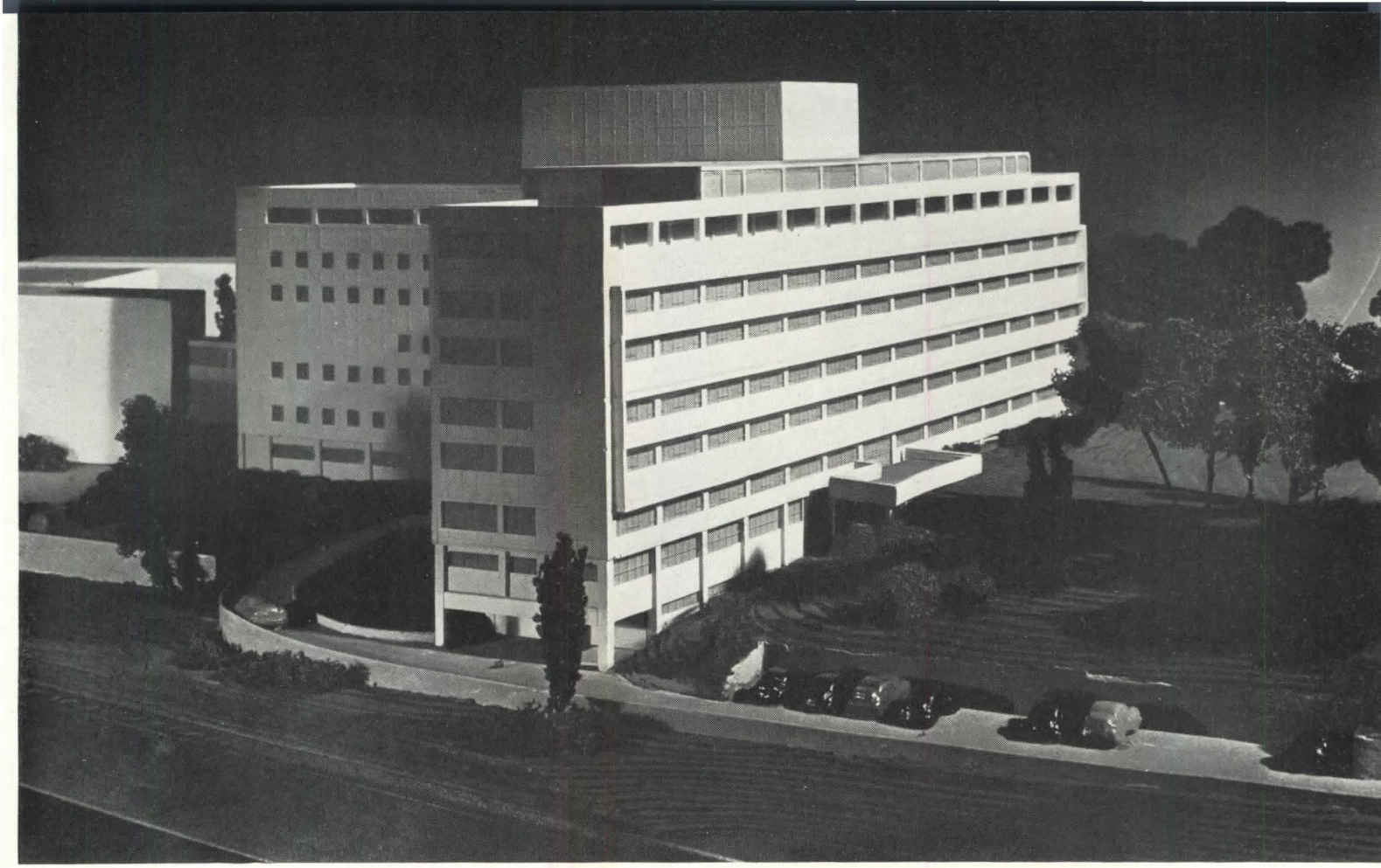


Ben Schnall Photos of Model

NEW HOSPITAL, left; existing plant, right.



Plot Plan



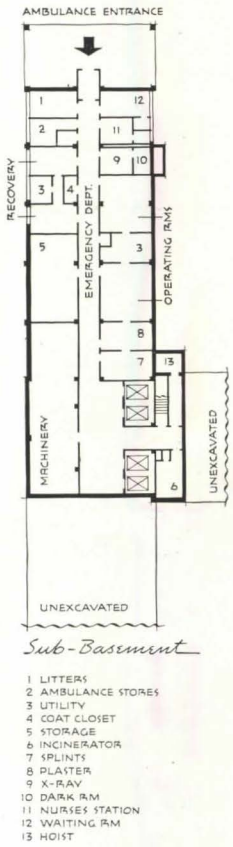
VIEW FROM SOUTHWEST. Wall-to-wall windows line the patients' rooms along upper floors of the south wall.

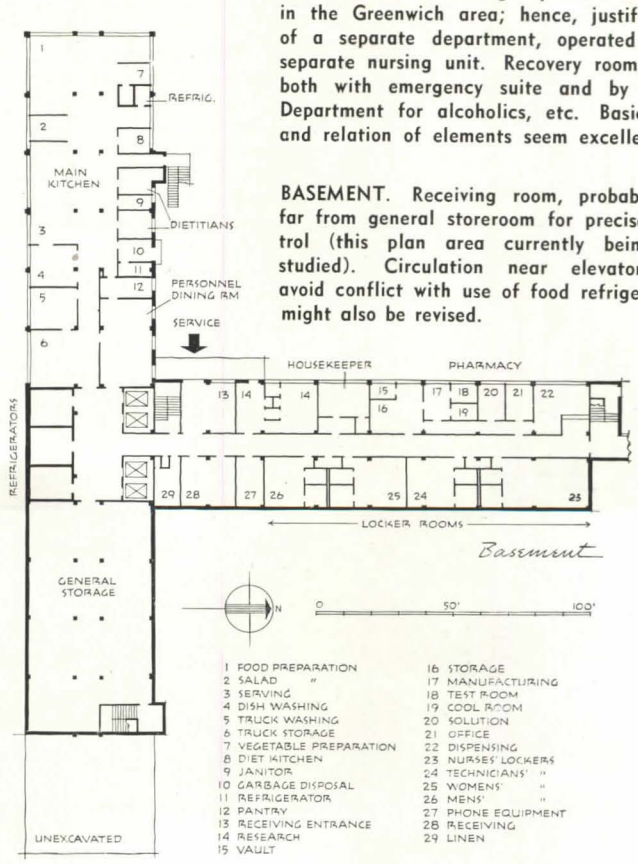
PROBLEM: To design a 222-bed hospital to be joined with the present structure, which will become the Outpatient Department and a nursing school and residence.

SITE: Sloping ground on the present hospital site.

MAIN POINTS ADMIRED: General organization of the building, with most patients' rooms oriented for optimum sunshine and so arranged along the rear face of the structure that they are apart from sights and sounds of both the visitors' and service entrances; provisions for future expansion; the direct architectural expression of the plan and structural scheme.

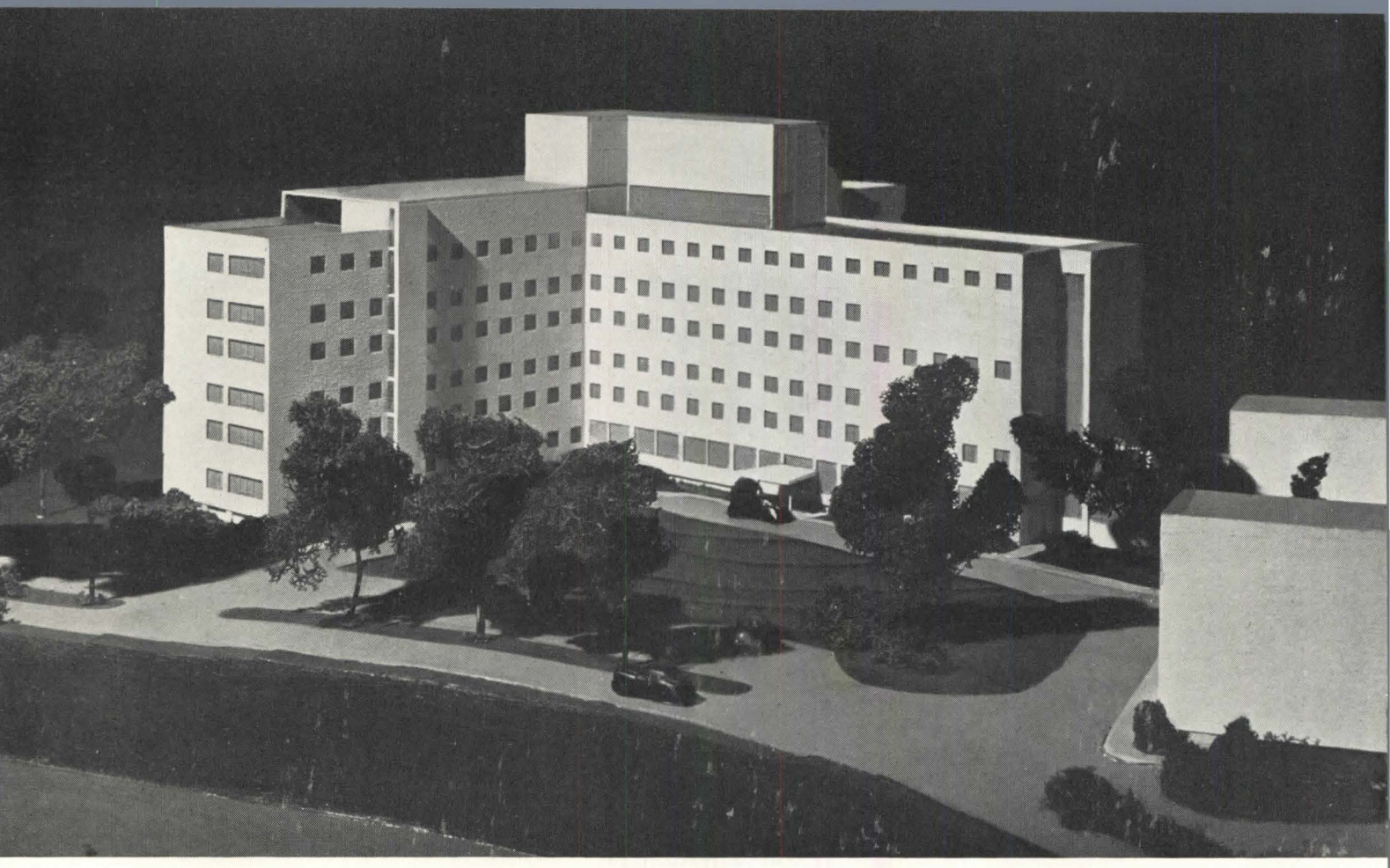
CHIEF POINTS QUESTIONED: Mainly plan details, such as justification of a separate—and separately staffed—emergency department on the hospital's subbasement floor; organization of storage space in relation to receiving office; the economy of having a nurses' station, a separate diet kitchen, etc., in each 22-bed half of the typical ward floor, etc.



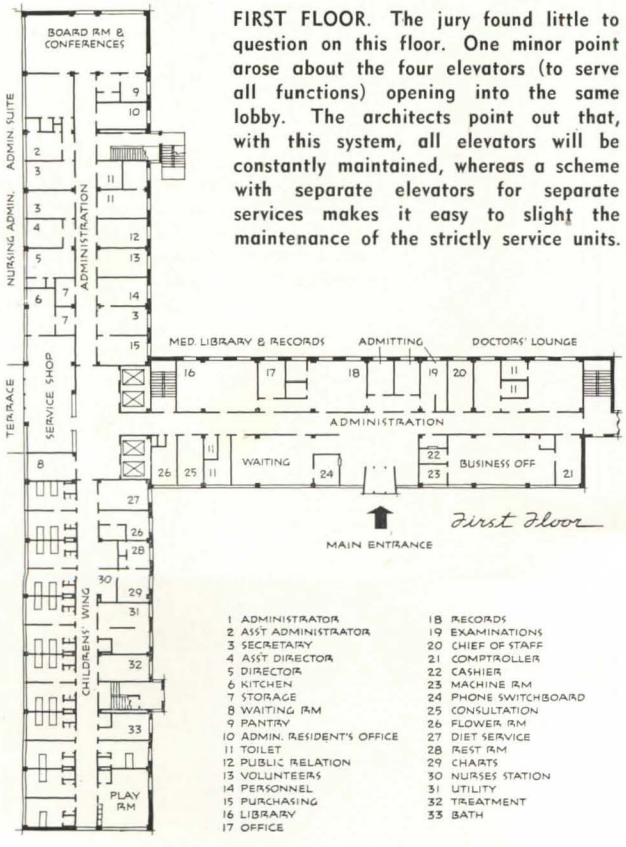


SUB-BASEMENT. Emergency cases are high in the Greenwich area; hence, justification of a separate department, operated as a separate nursing unit. Recovery rooms used both with emergency suite and by Police Department for alcoholics, etc. Basic plan and relation of elements seem excellent.

BASEMENT. Receiving room, probably too far from general storeroom for precise control (this plan area currently being restudied). Circulation near elevators, to avoid conflict with use of food refrigerators, might also be revised.

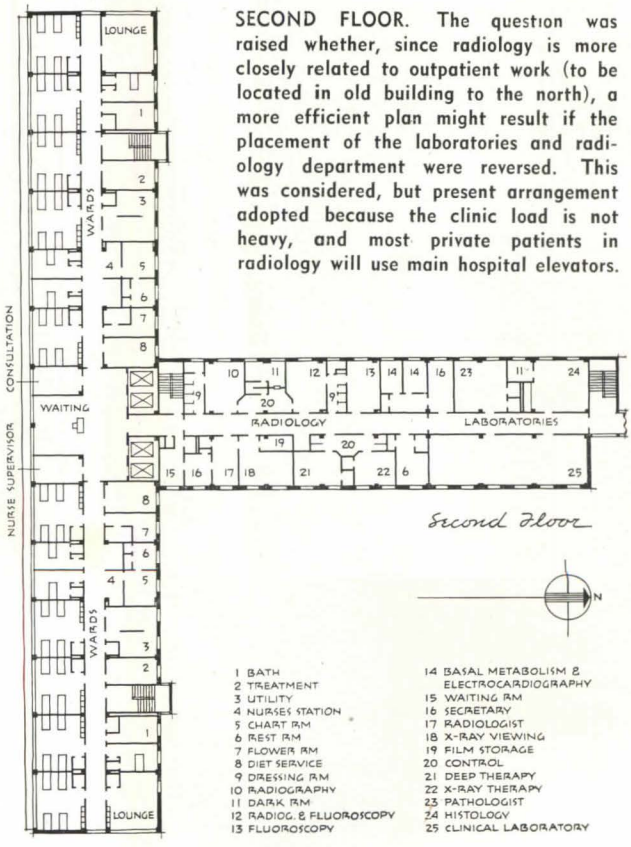


VISITORS' AND BUSINESS ENTRANCE occurs in the east wall of the north wing.



1 ADMINISTRATOR
2 ASST ADMINISTRATOR
3 SECRETARY
4 ASST DIRECTOR
5 DIRECTOR
6 KITCHEN
7 STORAGE
8 WAITING RM
9 PANTRY
10 ADMIN. RESIDENT'S OFFICE
11 TOILET
12 PUBLIC RELATION
13 VOLUNTEERS
14 PERSONNEL
15 PURCHASING
16 LIBRARY
17 OFFICE
18 RECORDS
19 EXAMINATIONS
20 CHIEF OF STAFF
21 COMPTROLLER
22 CASHIER
23 MACHINE RM
24 PHONE SWITCHBOARD
25 CONSULTATION
26 FLOWER RM
27 DIET SERVICE
28 REST RM
29 CHARTS
30 NURSES STATION
31 UTILITY
32 TREATMENT
33 BATH

FIRST FLOOR. The jury found little to question on this floor. One minor point arose about the four elevators (to serve all functions) opening into the same lobby. The architects point out that, with this system, all elevators will be constantly maintained, whereas a scheme with separate elevators for separate services makes it easy to slight the maintenance of the strictly service units.



1 BATH
2 TREATMENT
3 UTILITY
4 NURSES STATION
5 CHART RM
6 REST RM
7 FLOWER RM
8 DIET SERVICE
9 DRESSING RM
10 RADIOGRAPHY
11 DARK RM
12 RADIOG. & FLUOROSCOPY
13 FLUOROSCOPY
14 BASAL METABOLISM & ELECTROCARDIOGRAPHY
15 WAITING RM
16 SECRETARY
17 RADIOLOGIST
18 X-RAY VIEWING
19 FILM STORAGE
20 CONTROL
21 DEEP THERAPY
22 X-RAY THERAPY
23 PATHOLOGIST
24 HISTOLOGY
25 CLINICAL LABORATORY

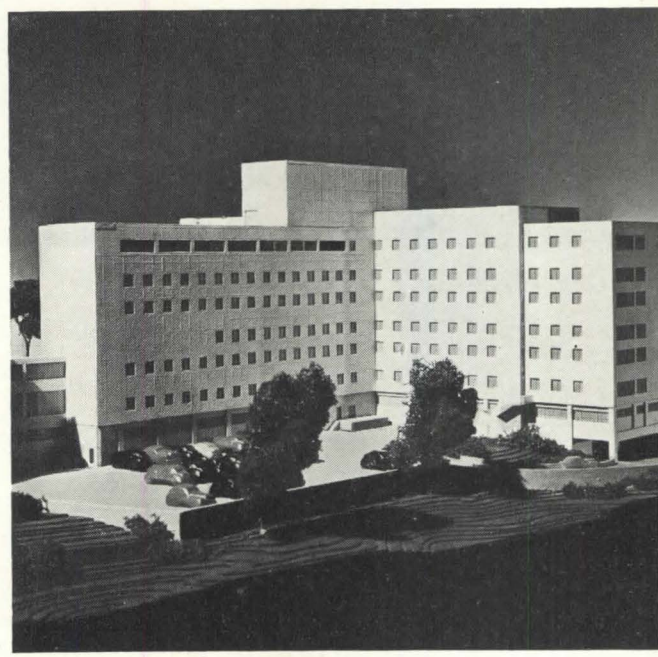
SECOND FLOOR. The question was raised whether, since radiology is more closely related to outpatient work (to be located in old building to the north), a more efficient plan might result if the placement of the laboratories and radiology department were reversed. This was considered, but present arrangement adopted because the clinic load is not heavy, and most private patients in radiology will use main hospital elevators.

1 . . . GREENWICH HOSPITAL, GREENWICH, CONNECTICUT

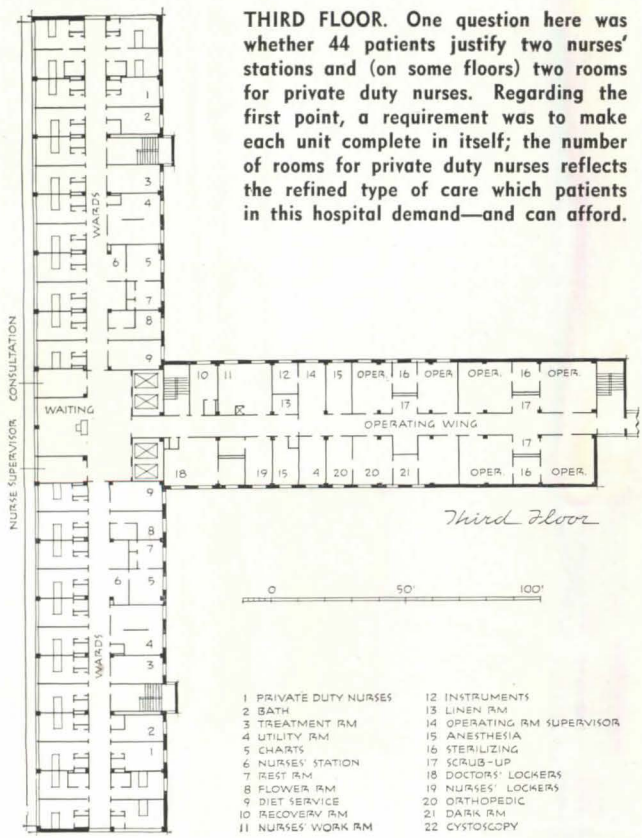
SKIDMORE, OWINGS & MERRILL, Architects

The parti for the design is a T-shaped scheme, with most of the patients' rooms in the cross bar of the T, facing south, and administrative offices, operating suites, laboratories, etc., in the stem of the T, which is joined to the existing plant (future Outpatient Department and nurses' home and school) on the four lower levels. The typical nursing floor, consisting of twin units, is arranged symmetrically either side of the central elevator lobby, and each is a complete unit with its own nurses' station, chart room, diet service room, etc., so that no spaces have to be shared.

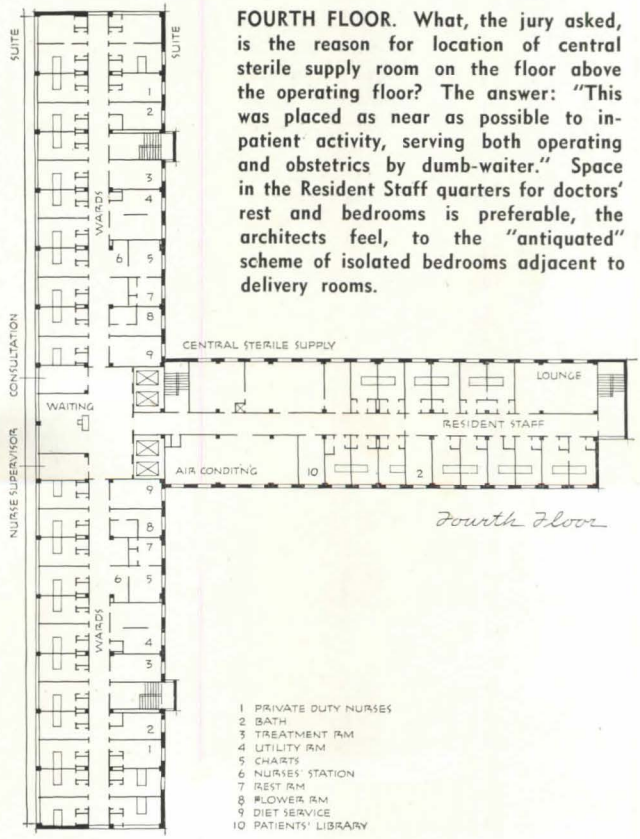
Because of the character of this community, a majority of the rooms are one- and two-bedrooms rather than wards. As the architects tell us: "The entire staff requested complete nursing units, and these are justifiable in Greenwich." Future expansion can be handled by additions to either the east or west ends of the nursing unit wings.



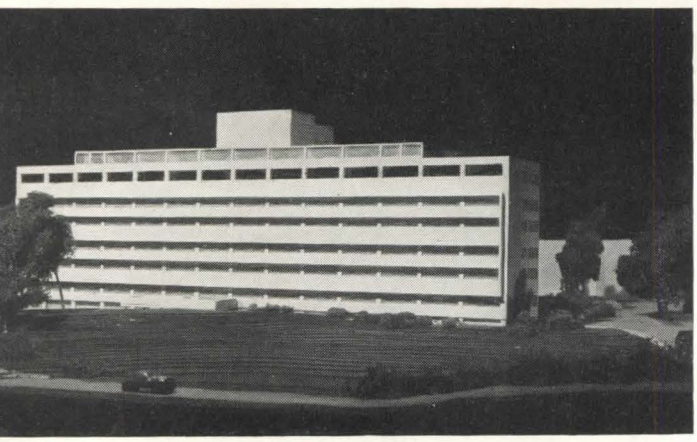
DELIVERY, SUPPLIES, etc., are on the west.



THIRD FLOOR. One question here was whether 44 patients justify two nurses' stations and (on some floors) two rooms for private duty nurses. Regarding the first point, a requirement was to make each unit complete in itself; the number of rooms for private duty nurses reflects the refined type of care which patients in this hospital demand—and can afford.



FOURTH FLOOR. What, the jury asked, is the reason for location of central sterile supply room on the floor above the operating floor? The answer: "This was placed as near as possible to in-patient activity, serving both operating and obstetrics by dumb-waiter." Space in the Resident Staff quarters for doctors' rest and bedrooms is preferable, the architects feel, to the "antiquated" scheme of isolated bedrooms adjacent to delivery rooms.

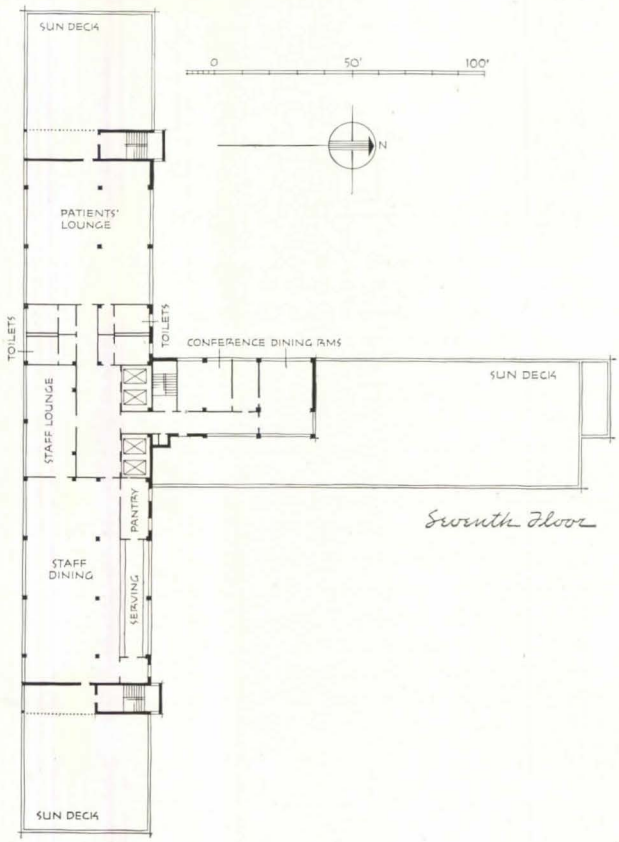


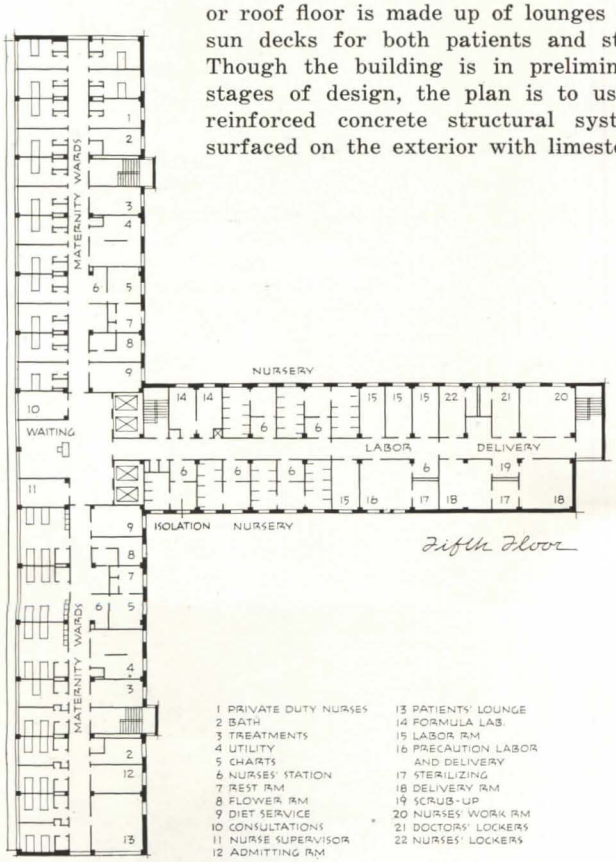
SOUTHERN FRONT

1 . . . GREENWICH HOSPITAL
GREENWICH, CONNECTICUT

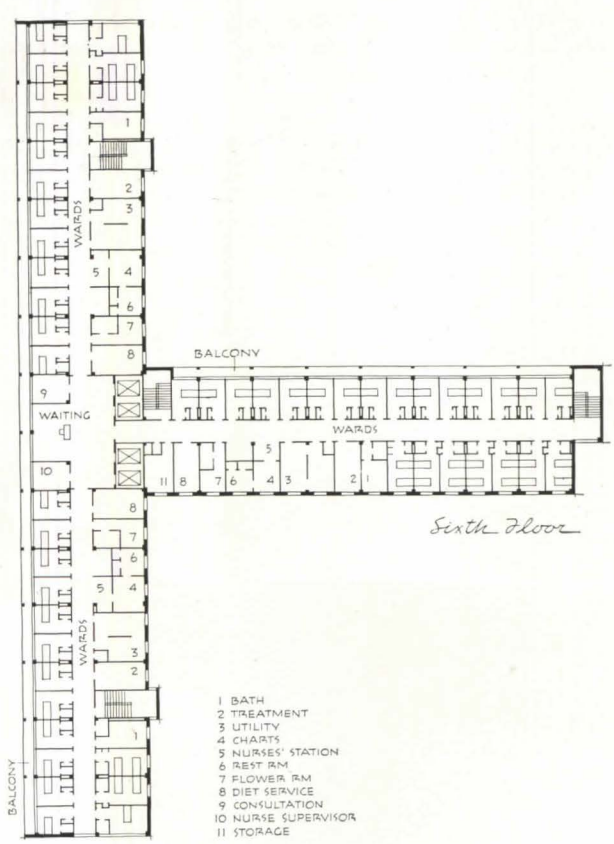
SKIDMORE, OWINGS & MERRILL, Architects

Typical pairs of nursing units occur on the second, third, and fourth floors. The entire fifth floor is given over to maternity services; the sixth floor is untypical in that it includes a third nursing unit in the wing to the north, and the seventh or roof floor is made up of lounges and sun decks for both patients and staff. Though the building is in preliminary stages of design, the plan is to use a reinforced concrete structural system, surfaced on the exterior with limestone.





1 PRIVATE DUTY NURSES
2 BATH
3 TREATMENTS
4 UTILITY
5 CHARTS
6 NURSES' STATION
7 REST RM
8 FLOWER RM
9 DIET SERVICE
10 CONSULTATIONS
11 NURSE SUPERVISOR
12 ADMITTING RM
13 PATIENTS' LOUNGE
14 FORMULA LAB.
15 LABOR RM
16 PRECAUTION LABOR AND DELIVERY
17 STERILIZING
18 DELIVERY RM
19 SCRUB-UP
20 NURSES' WORK RM
21 DOCTORS' LOCKERS
22 NURSES' LOCKERS



1 BATH
2 TREATMENT
3 UTILITY
4 CHARTS
5 NURSES' STATION
6 REST RM
7 FLOWER RM
8 DIET SERVICE
9 CONSULTATION
10 NURSE SUPERVISOR
11 STORAGE

Yngve Andersson

Malms

2 . . . SOUTHERN HOSPITAL, STOCKHOLM, SWEDEN

HJALMAR CEDERSTROM
Architect

PROBLEM: To develop a municipal, 1200-bed central hospital—Mr. Cederstrom refers to it as a "public health center"—including every diagnostic and therapeutic facility known to medical science, as one of the major keys in the nation's social health and welfare program. To provide for prevention and early treatment quite as much as for the more acute problems of inpatient service.

SITE: An open hilltop above Arster Bay in the Sodermalm section of Stockholm.

MAIN POINTS ADMIRED: The concept of developing this institution as an integral part of a program for the nation; the excellent separation and interrelation of outpatient and inpatient departments; the planning of the typical 32-bed nursing unit.

CHIEF POINTS QUESTIONED: The desirability of so large a unit; whether several related but smaller buildings might not be preferable to a vast single structure.

RAMP LEVEL ENTRANCE TO POLYCLINICS

GROUND LEVEL ENTRANCE FOR VISITORS

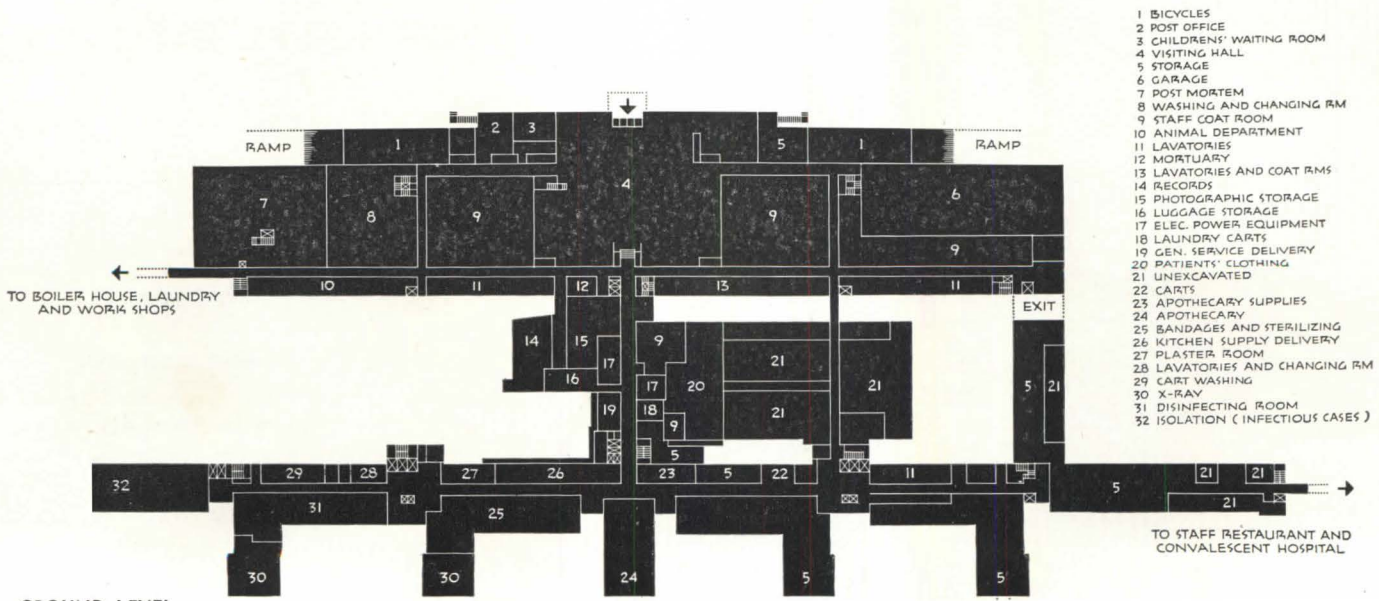
C. Gemler

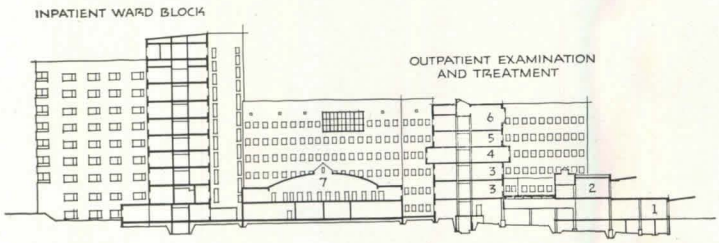
2 . . SOUTHERN HOSPITAL, STOCKHOLM, SWEDEN

HJALMAR CEDERSTROM, Architect

Experts from all over the world worked with Mr. Cederstrom and the other authorities in determining basic needs and the planning approach. From this research, which continued over a number of years, the decision was reached to develop the plan as a "double block" scheme, with the main, 9-story mass of the wards and nursing units (inpatient facilities) organized in a broad wing with projecting bays on the south, and the outpatient polyclinics, X-ray departments, operating theaters, etc., in a lower, parallel building toward the north.

Transverse wings that include services related to the adjacent departments join the north and south blocks, and ambulance and service entrances occur to the west, within the court formed by the main building masses. Principal entrances occur on the north and are arranged on two levels—patients and visitors for the nursing-unit block entering at the lower level, passing through the building and so, by elevator, up to ward floors; outpatients who come for examination and treatment entering via the upper-level ramp.

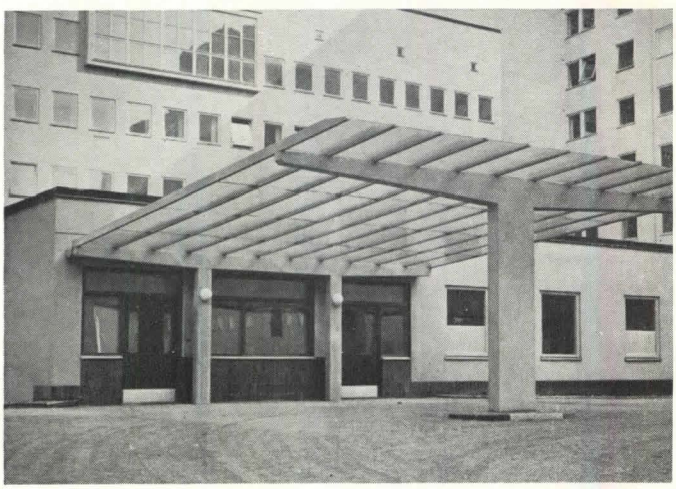




1. Visitors' Entrance Hall 2. Entrance to Polyclinics 3. Polyclinics 4. X-ray Department 5. Central Laboratories 6. Operating Theaters 7. Physical Therapy

There are two main sets of vertical transportation—one for inpatients and visitors (south wing); the other, to serve outpatients in the north wing. Horizontal communication is provided within the transverse wings at the two entrance levels and on four floors above.

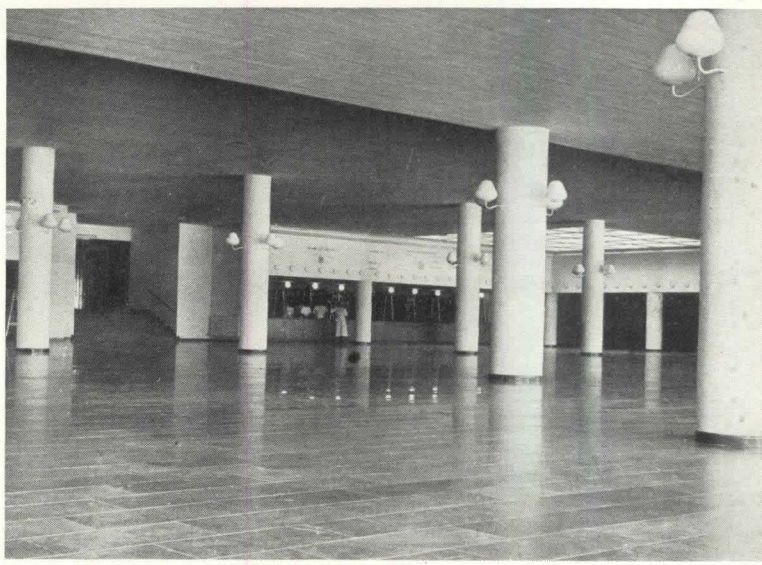
Underground, blasted from solid rock is a gas- and bombproof shelter, where the hospital facilities are repeated at smaller scale. Here, in case of emergency, is space for 2,500 persons, including 1,000 bed patients. Elevators reach this level, but in case of power failure, there is also access by ramp.



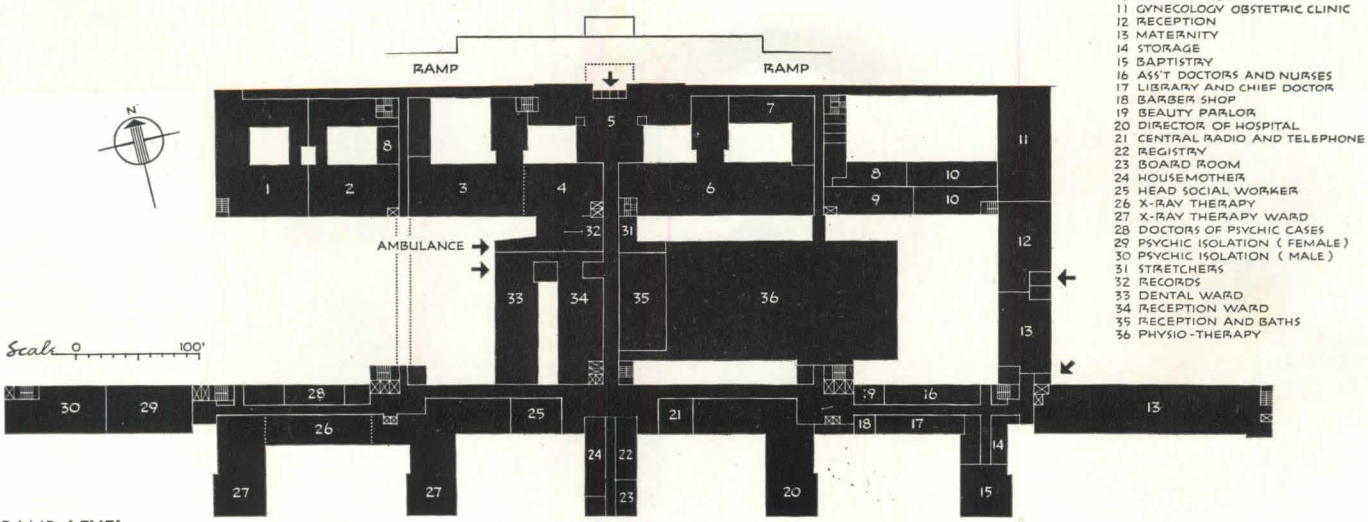
Malms Photos

AMBULANCE ENTRANCE: Accident cases, left; medical, right.

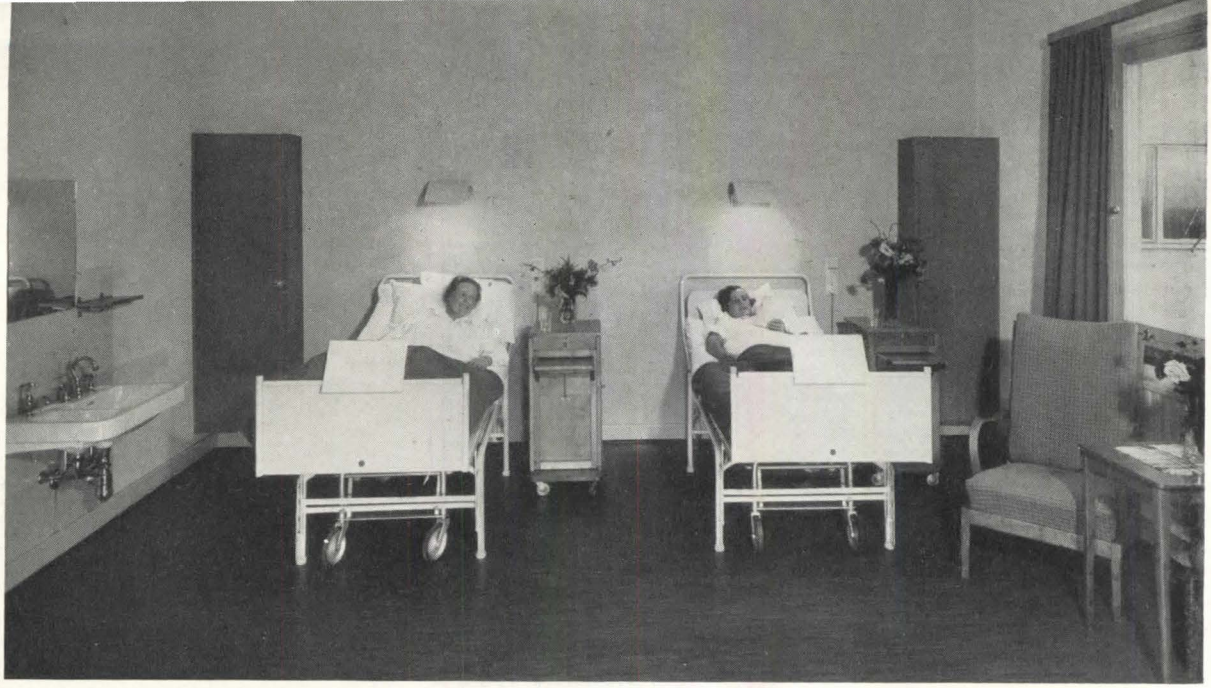
OUTPATIENT ENTRANCE HALL (upper level). Cloakroom, right.



VISITORS' ENTRANCE HALL, skylighted from courtyard above.



RAMP LEVEL



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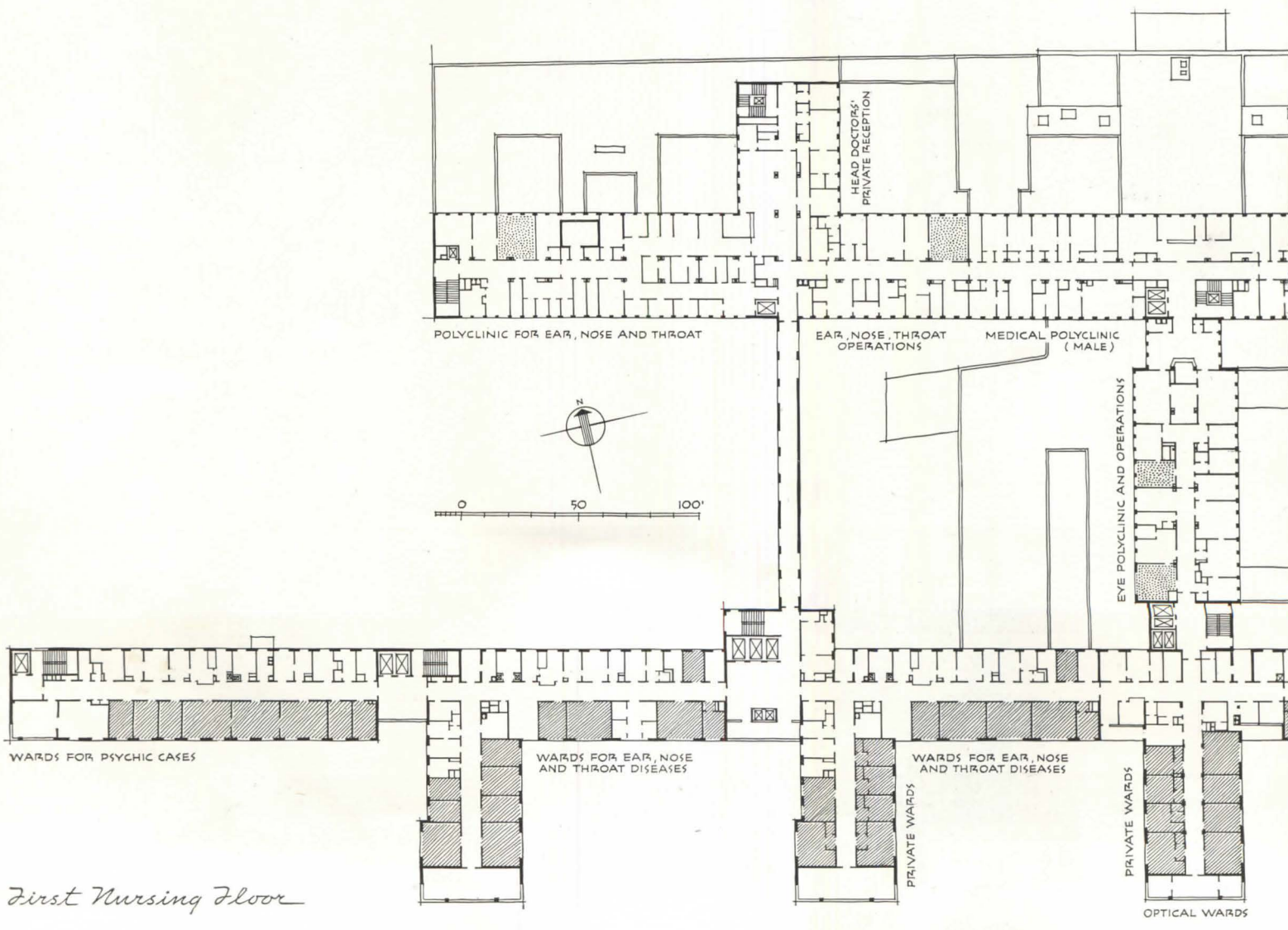
One side of a 4-BED ROOM

2 . . . SOUTHERN HOSPITAL, STOCKHOLM, SWEDEN

HJALMAR CEDERSTROM, Architect



First Nursing Floor

Malms

SOLARIUM

Bertil Norberg

WARD CORRIDOR—opening to dayroom, at left.

Malms

A DAYROOM with a balcony

The typical L-shaped ward or nursing unit is duplicated more than 30 times in the southern inpatient wing. Thirty-two patients are cared for in each ward: 5 rooms for 4 patients; 4 rooms for 2 patients; and 4 rooms for a single patient. Convalescents use the big general solarium at the end of each southern bay. Although each floor varies in detail, the floor plan below clearly shows the basic plan organization—the clinic block, the ward block, and the connecting corridors and central services used by both nursing units and polyclinics.

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NURSE'S STATION

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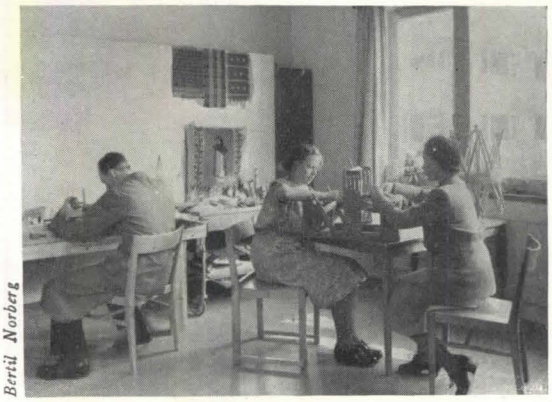
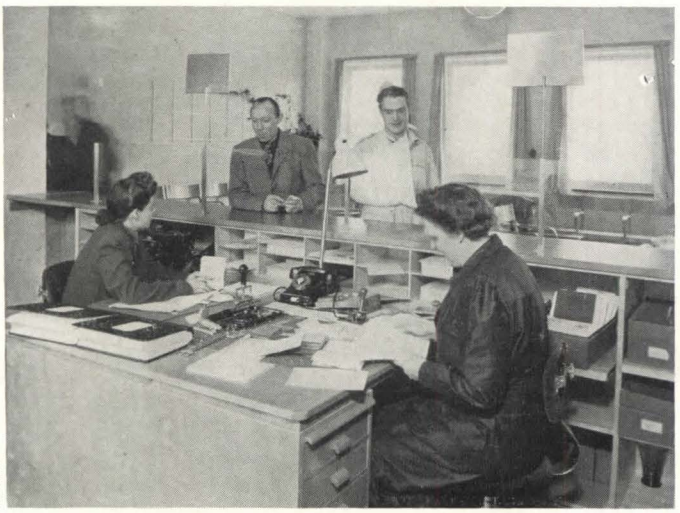
RECORDS OFFICE



Bertil Norberg

OCCUPATIONAL THERAPY



Malms

POLYCLINIC receiving desk

2 . . .

SOUTHERN HOSPITAL, STOCKHOLM, SWEDEN

Brief presentation of so vast a project can do no more than touch on the details of planning. The photographs on these two pages, however, indicate the care and thoroughness with which the design of the total institution has been handled. A typical plan refinement is the handling of food—from preparation to patient's bedside. Basic preparation takes place on the top floor of the ward block (diagrammatic plan, below).

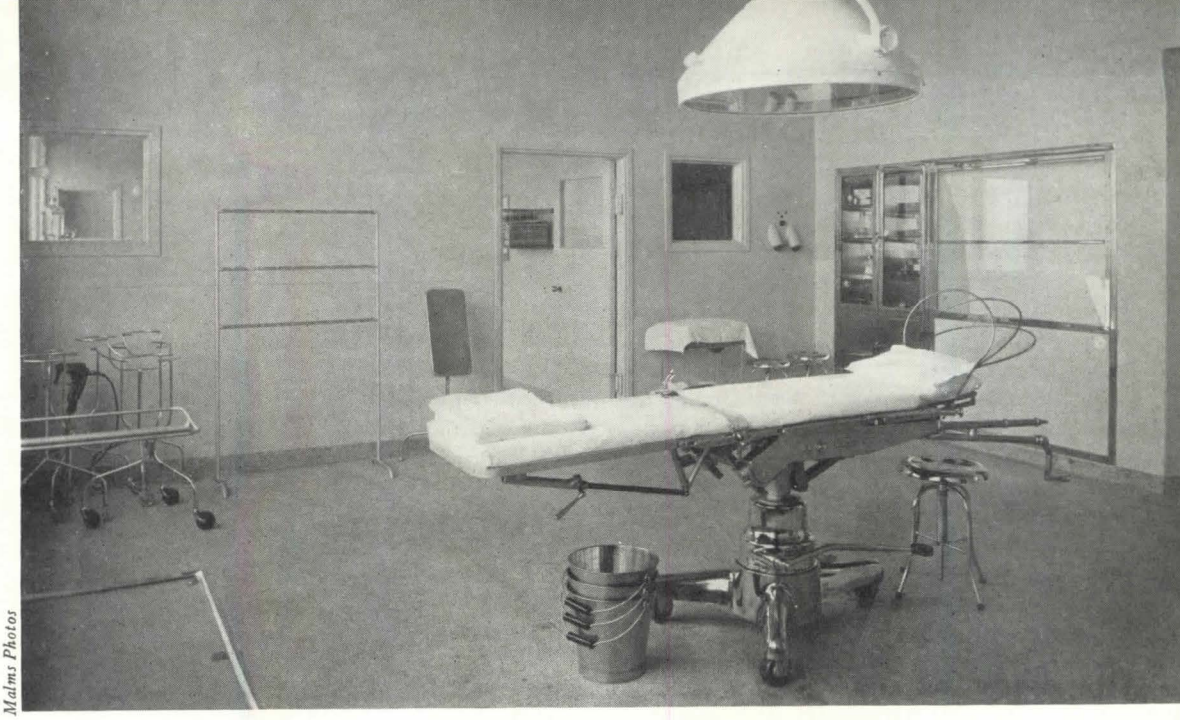
1 MAIN KITCHEN
2 SUBSIDIARY KITCHEN
3 CONTROL
4 STORAGE
5 SUBSIDIARY KITCHEN ON 5TH FLOOR

Bertil Norberg

CENTRAL KITCHEN

Swedish-International Press Bureau

DISTRIBUTION KITCHEN, one of 11



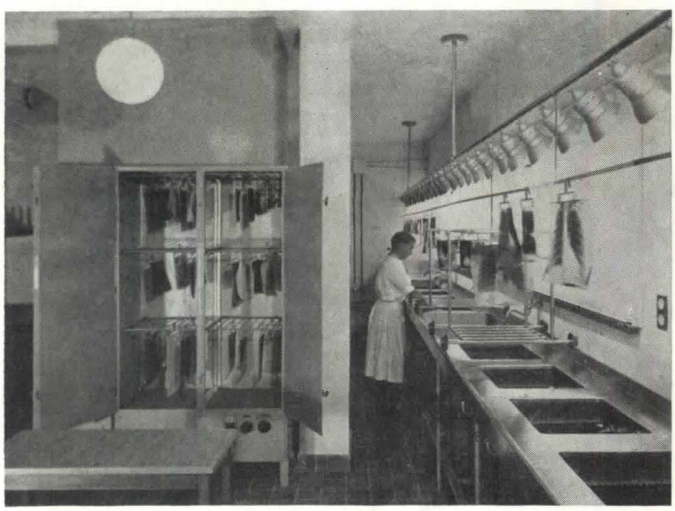
Malms Photos

OPERATING ROOM

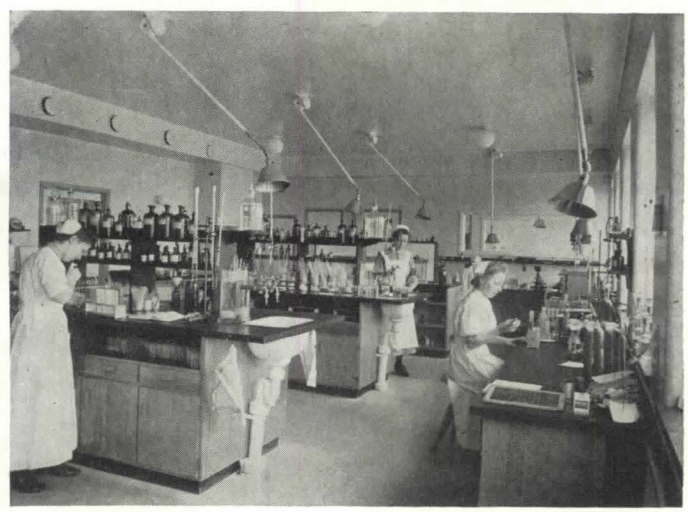
HJALMAR CEDERSTROM, Architect

From here, semi-prepared food goes to 11 distribution kitchens, where sauces, special-diet food, etc., are added. Thence, the dishes travel by dumb-waiter to the individual ward kitchens for distribution to the patients' rooms. Thus, a considerable degree of flexibility in diet is provided with a minimum of back-tracking and confusion. The building is of reinforced concrete construction, with walls heat-insulated by light, porous sheets of insulative material on the exterior of the walls. Where the insulation occurs below grade, it is protected from frost and water by a layer of ceramic tile.

LABORATORY detail



CONTROL ROOM, X-ray department



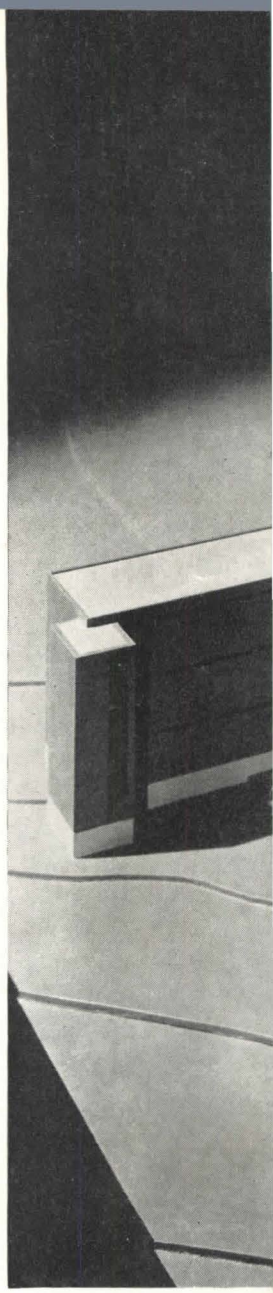
LABORATORY

Critique

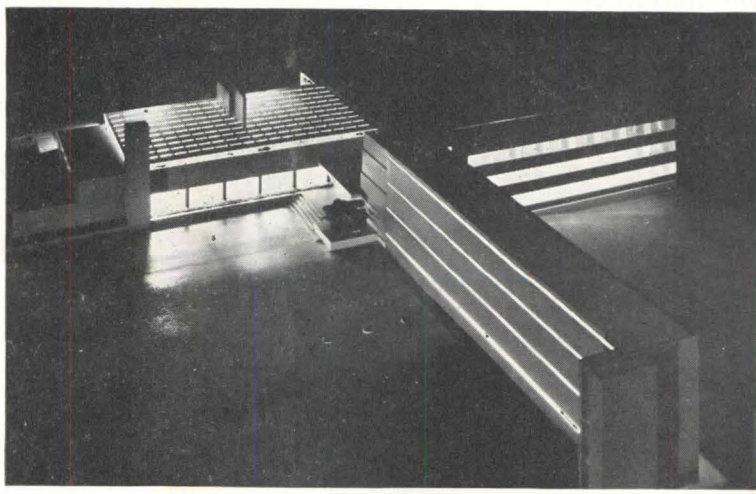
HEALTH FACILITIES

Turning from these excellent examples of the more usual types of health-care buildings, we now look at a group of buildings which are of a highly specialized (in some cases, entirely novel) nature. While the purpose of these buildings is quite different from that of a hospital, there are common denominators that apply throughout. Since all such institutions and adjunct buildings are costly to run, great emphasis in the planning goes to efficiency of operation; and in the selection of the structural scheme and building materials, economical maintenance is a strong controling factor. Also, the architect's imagination is consistently called upon to develop an environment that will assist the patient's sense of well-being and speed his recovery. To this extent, architecture itself becomes a significant part of the health-care procedure, and the architect's interest and service parallel those of the doctor. This fact is a good instance of the progressive approach to architectural practice, wherein buildings are far more than something beautiful to behold and are, in fact, integral parts of the society they are designed to serve.

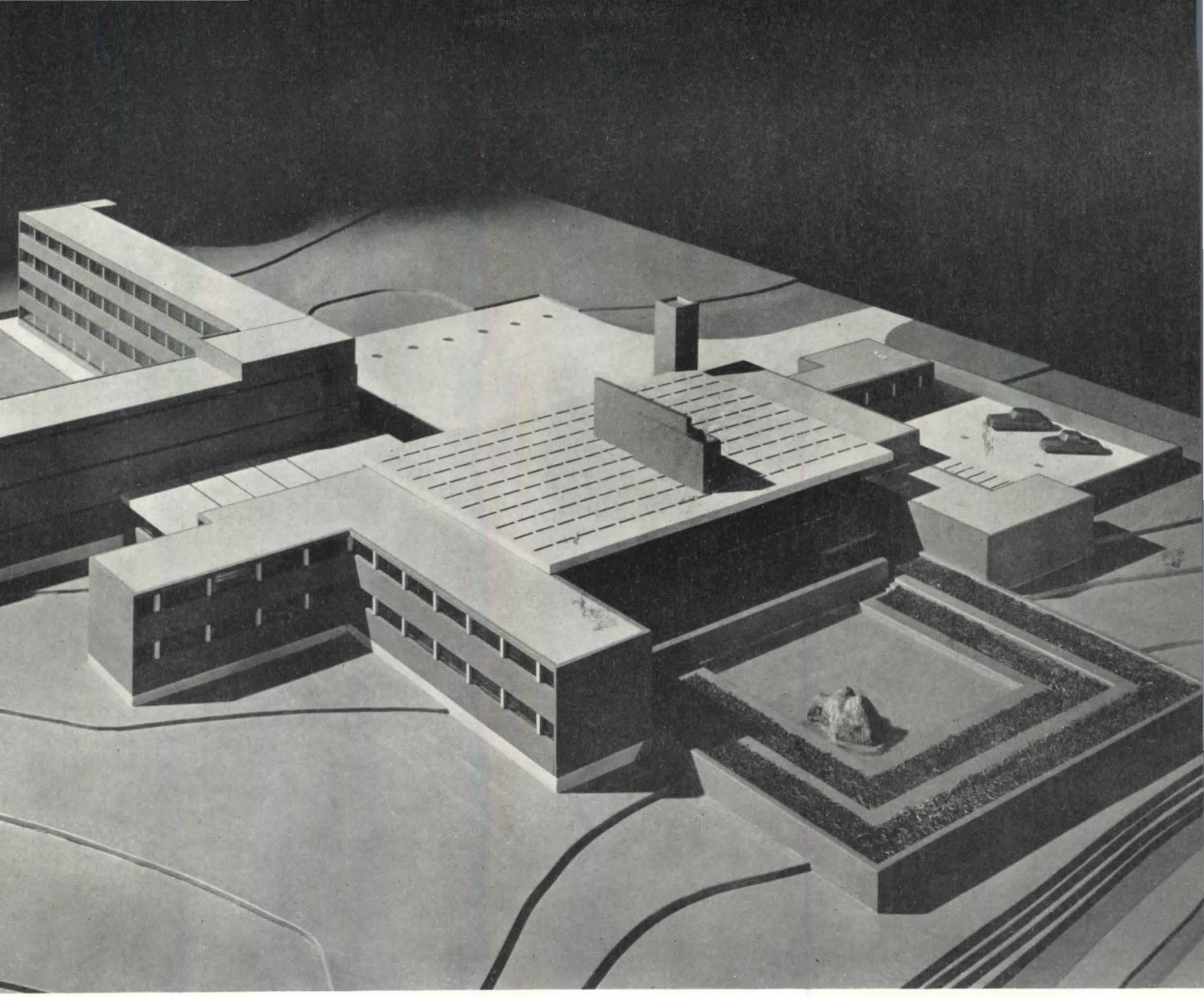
On the page facing is one of the most exceptional new building types in the health facility category—an institution specifically developed to further the cure of those whose lives have become burdened with alcoholism. Following this—in order—are the Wayne County, Michigan, Health Center; the King County Central Blood Bank in Seattle, Washington; the Nurses' Home for Memorial Hospital, Anniston, Alabama; and another nurses' residence provided for St. Benedict's Hospital in St. Cloud, Minnesota.



GARDEN SIDE of building.



ENTRANCE CORNER. Dormitory wings: foreground and above, right.



Big windows in the dining room and lounge overlook the pool.

3 . . . DORMITORY, KEELEY INSTITUTE, DWIGHT, ILLINOIS

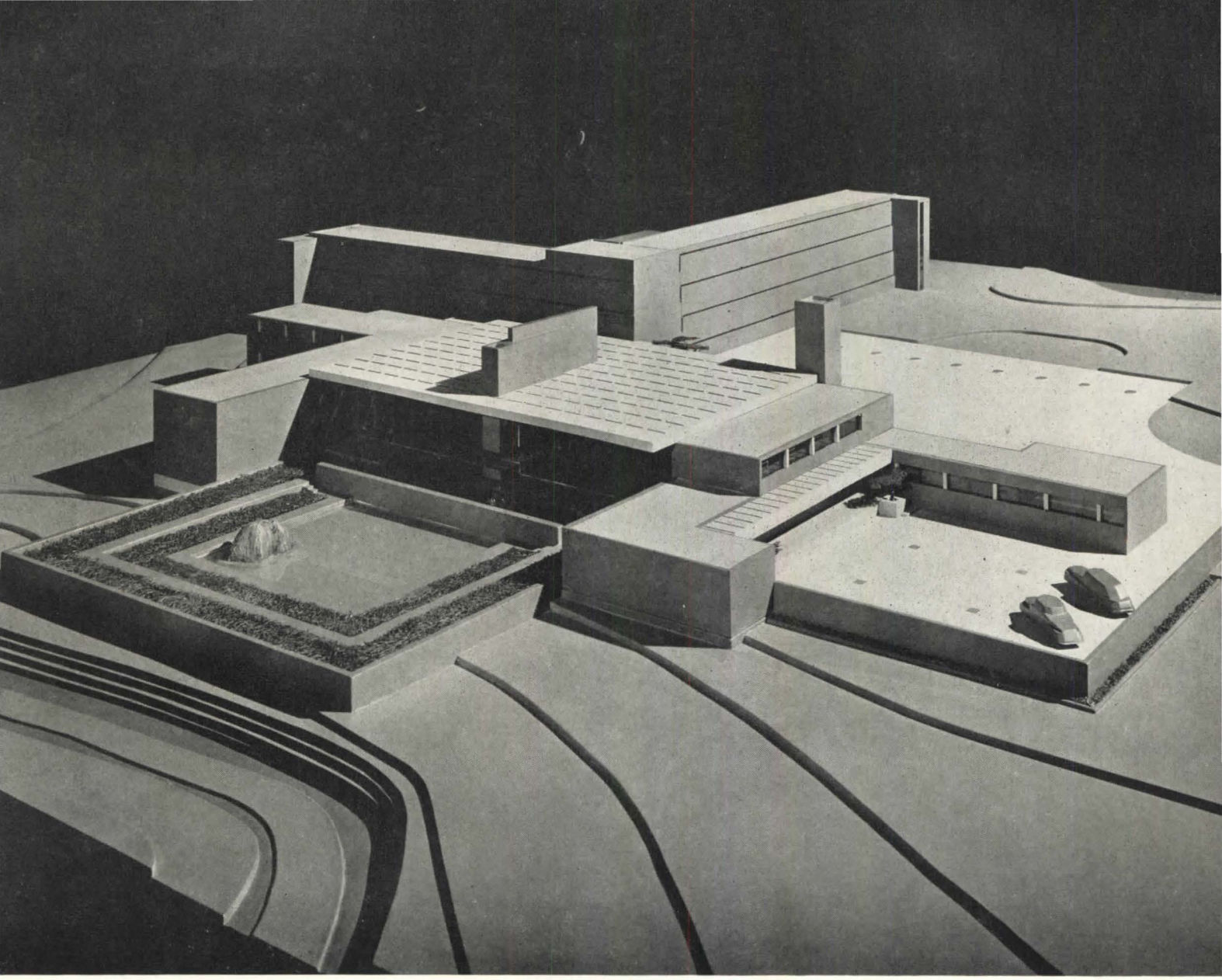
SCHWEIKHER & ELTING
Architects

PROBLEM: To design an institution for the treatment and care of alcoholic patients which would serve efficiently as a health-care facility yet would have a character that would be more residential than institutional—a factor considered important to the psychological treatment of patients.

SITE: The 20-acre site of the present Keeley Institute buildings.

MAIN POINTS ADMIRED: The general plan organization, the structural system, designed for economical maintenance; the design character which suggests a resort hotel rather than a hospital.

CHIEF POINTS QUESTIONED: Method of control and circulation within the building (points which an explanation of the Keeley system clarify); the absence of lounges on the separate patients' floors.

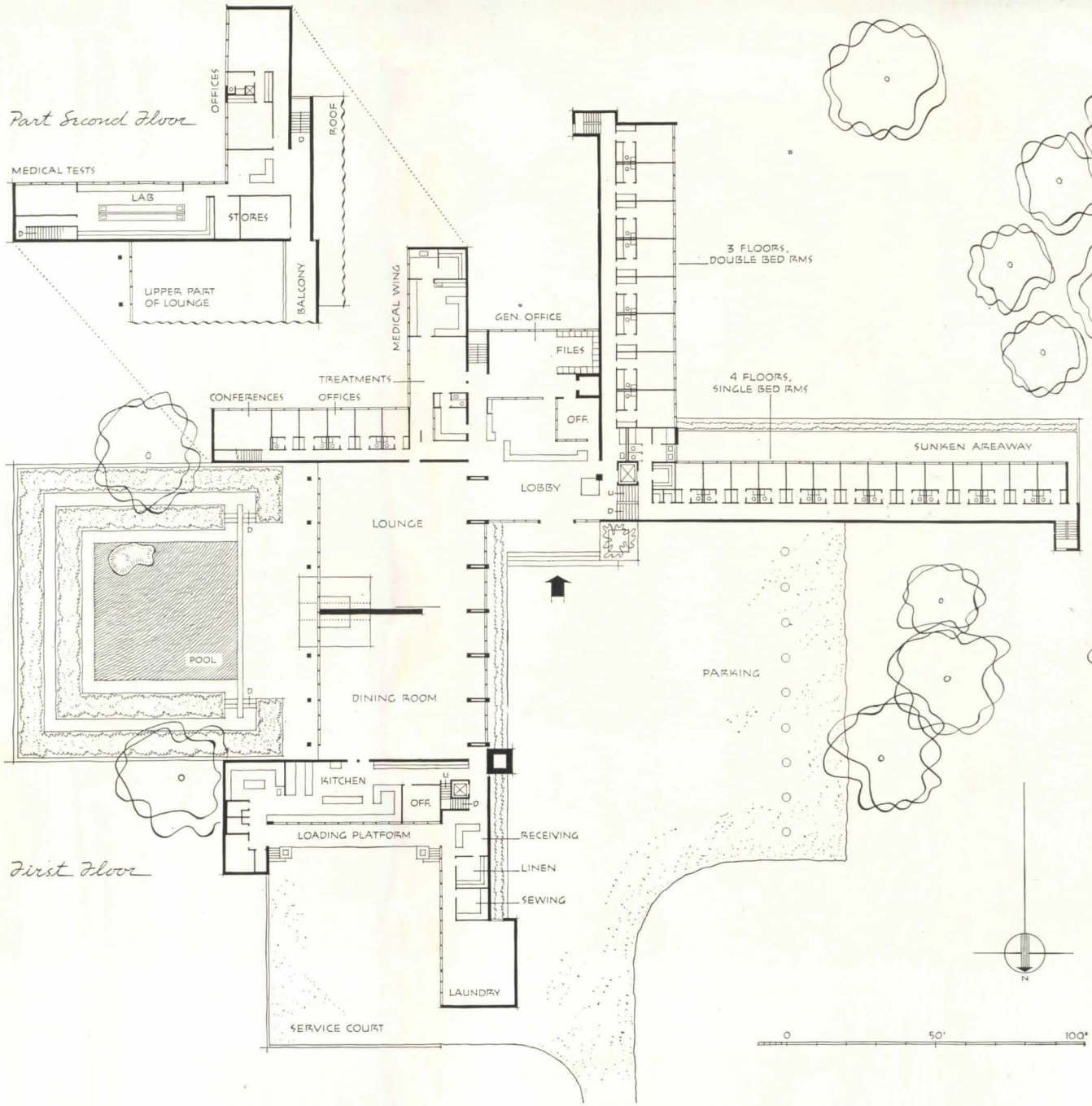


"EGG CRATE" STRUCTURE: Thin, reinforced concrete floor slabs, supported on partition walls (thin concrete cores surfaced both sides with brick). Exterior corridor walls are simply "curtains" of hollow cavity brick construction, joined to floor slab above by continuous, daylighting bands of glass. Roof slabs across the lounge and dining room are of lightweight perforated steel construction with interposed glass panels (see night photo of model).

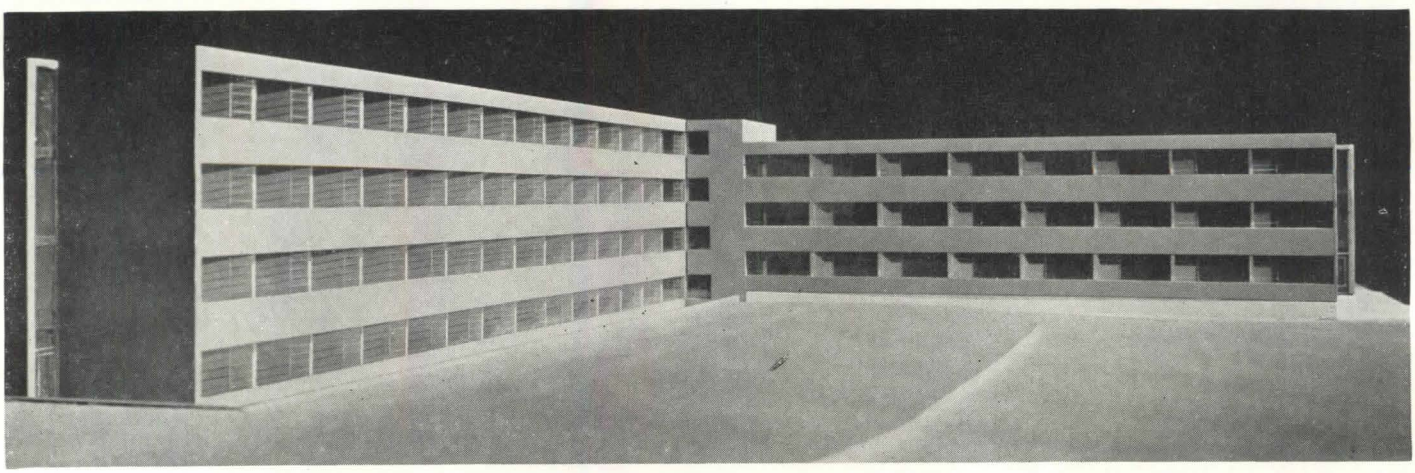
3 . . . DORMITORY, KEELEY INSTITUTE, DWIGHT, ILLINOIS

The new building will have 84 rooms, including administrative offices, a lounge, dining facilities for 130, the bedroom wings, kitchen, laundry, a laboratory, offices for doctors, and rooms for medical treatment. The critics asked whether the complete separation of the bedroom wings would not make control and supervision difficult, further questioning what facility was provided for special, continuous care, in case a patient should need it. The answer is that, after a certain hour of the evening, patients do not come and go through the building and the only "control" required is visual, from the clerk's desk in the main lounge. In fact, it is pointed out that this desk controls movements to and from all parts of the building—to the lounge and dining rooms, to the medical wing and doctors' offices, as well as to the bedrooms. Patients in most cases are entirely capable of taking care of themselves; if some one patient needs particular care, an orderly stays on a cot placed in the patient's room. Lack of recreation facilities, a library, etc., is explained by the fact that these are located in an existing near-by recreation building. As to the absence of lounges on the different floors, the architects explain that all patients are ambulatory and hence can use the general lounge, as in a hotel.

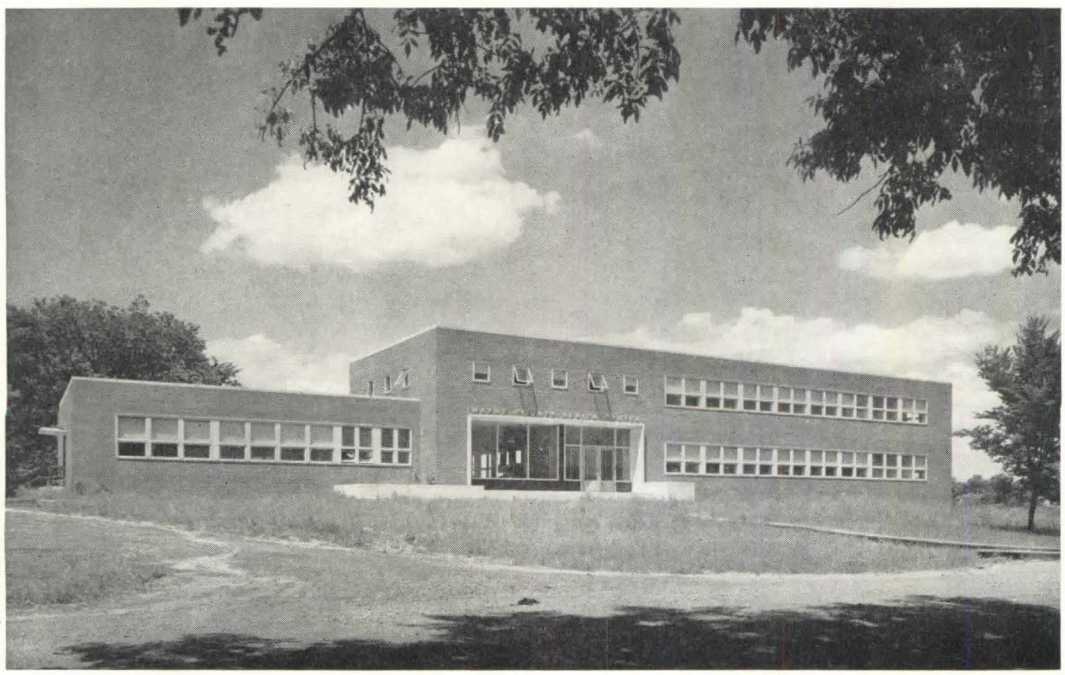
SCHWEIKHER & ELTING
Architects



PLAN: Developed around the square as a module.



BEDROOM WINGS: Staggered floor system in single-bedroom wing provides four floors, with a maximum climb of two and a half flights from main floor.

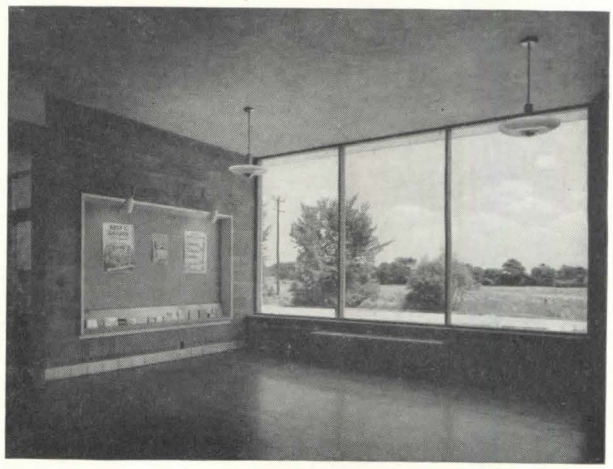


Rodney McCay Morgan Photos

THE HEALTH CENTER is on a rural site adjoining the County Hospital. Because of a spring flood condition, there is no basement. Dry storage is provided in the room above the main waiting room.

4 . . . WAYNE COUNTY HEALTH CENTER, MICHIGAN

EBERLE M. SMITH ASSOCIATES, Architects



WAITING ROOM, looking toward roadway.

PROBLEM: To supply dental, maternal, X-ray, tuberculosis, and venereal disease treatment and control, plus a headquarters for the Wayne County Board of Health, County Sanitary Engineers, and County Nurses.

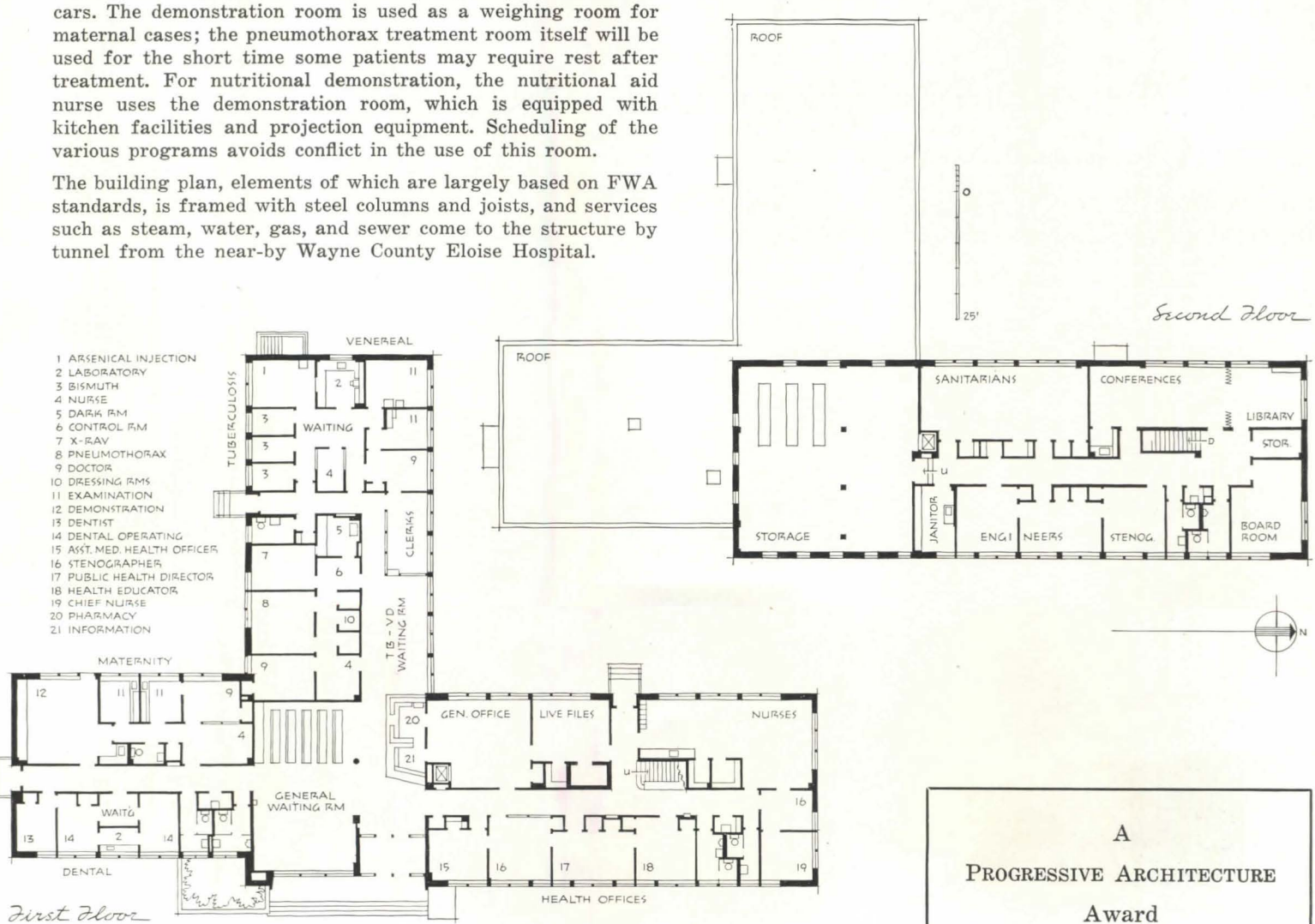
SITE: Beside a gravel country road several miles from a residential area.

MAIN POINTS ADMIRED: Efficient plan with centralized control; two waiting rooms that separate the TB and VD cases from the maternity-dental patients; clean over-all design.

CHIEF POINTS QUESTIONED: Why no baby-carriage room; where baby-weighing takes place; where patients rest after pneumothorax treatment; what room is used for nutritional aid program.

The jury's questions were answered in order. There is no baby-carriage room, because the rural location of the building makes this unnecessary: patients arrive either by bus or in their own cars. The demonstration room is used as a weighing room for maternal cases; the pneumothorax treatment room itself will be used for the short time some patients may require rest after treatment. For nutritional demonstration, the nutritional aid nurse uses the demonstration room, which is equipped with kitchen facilities and projection equipment. Scheduling of the various programs avoids conflict in the use of this room.

The building plan, elements of which are largely based on FWA standards, is framed with steel columns and joists, and services such as steam, water, gas, and sewer come to the structure by tunnel from the near-by Wayne County Eloise Hospital.



A
PROGRESSIVE ARCHITECTURE
Award
HONORABLE MENTION

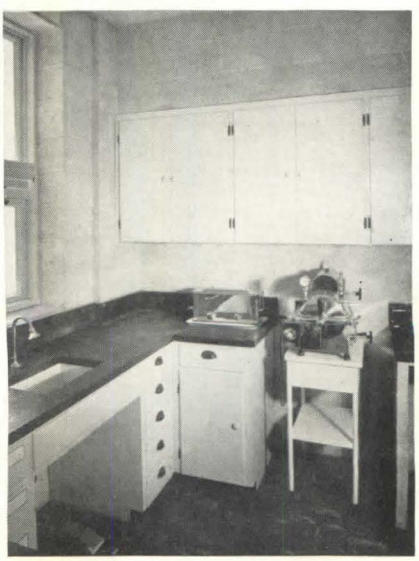
GENERAL WAITING ROOM, toward control-information desk.

4 . . . WAYNE COUNTY HEALTH CENTER, MICHIGAN

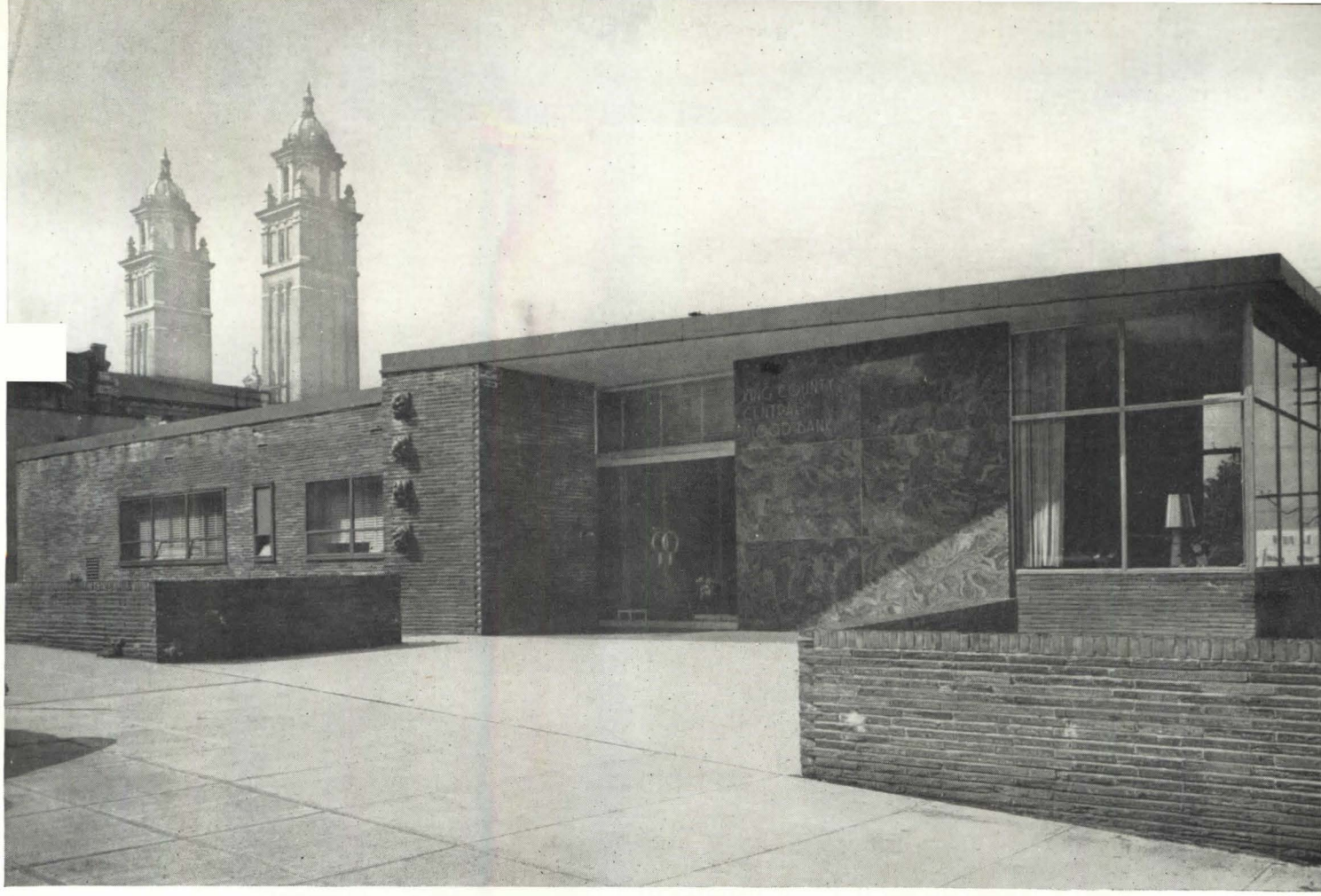
EBERLE M. SMITH ASSOCIATES, Architects

The general waiting room and information desk are so organized that the nurse stationed at the desk has control of all of the main floor. She has an immediate view of the principal entry and (down a corridor) of the exit door from the maternity-dental wing. She can also view the tuberculosis-venereal waiting room through the pharmacy at the right of the desk. For the privacy of patients, exit doors direct to parking space are provided from both wings of the building, so there is no need to return through the waiting rooms.

LABORATORY



NURSES' ROOM



STRUCTURE: Reinforced concrete frame and slabs for lower story; structural steel columns and beams for upper floor (shown above).

5 . . . KING COUNTY CENTRAL BLOOD BANK, SEATTLE, WASHINGTON

NARAMORE, BAIN, BRADY & JOHANSON
and JOSEPH WOHLEB, Architects

PROBLEM: To provide a center for the convenience and comfort of blood donors and for the efficient handling and processing of the plasma. Storage space for an ample supply, in case of emergency.

SITE: A side hill in the center of Seattle's hospital district, allowing access to both main and lower floors at grade.

MAIN POINTS ADMIRED: The plan organization that places the several steps involved in blood-giving in logical order, with a minimum of path-crossing; the informal design character of the building that is considerably more welcoming than the usual institution; the well planned separation between public and staff-administrative space.

CHIEF POINTS QUESTIONED: Whether curtains separating the donors' cots might be an improvement in detail; what procedure is followed in case the process proves too severe for a donor; why the director's and his secretary's offices are so completely separated.

One hundred percent of the hospitals in Seattle and King County participate in the blood-bank program that this unique structure serves. The project was initiated by a group of public-spirited citizens who formed a corporation to raise funds for the construction and equipment of the building.

P. A. Dearborn Photos

LABORATORY

ENTRANCE

REGISTRATION

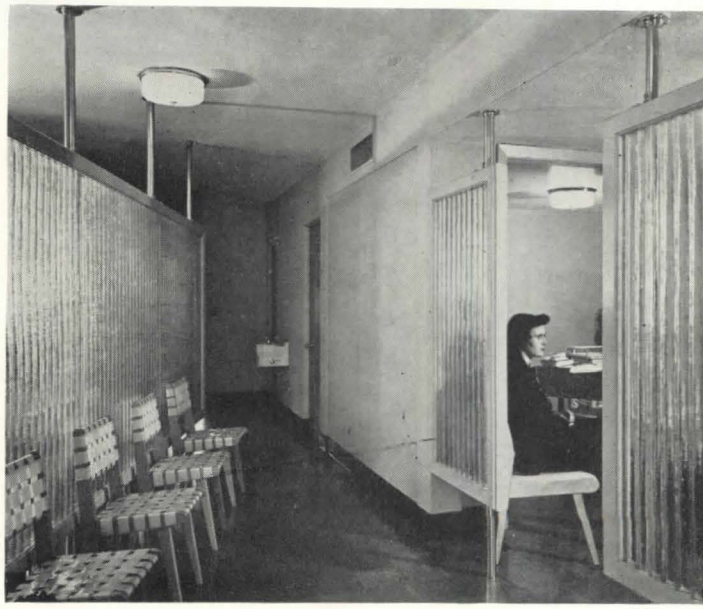
5 . . . KING COUNTY CENTRAL BLOOD BANK, SEATTLE, WASHINGTON

NARAMORE, BAIN,

In answer to the jury's questions, the blood-bank director does not see any advantage to curtaining between cots. Curtains are not only a nuisance, but many people prefer to be in the same area with others while giving blood. Alongside the blood-letting room is a rest room for patients requiring it; in case of fainting, the patient is moved by wheel chair.

BLOOD LETTING (cots cantilevered from wall)

WAITING



EXAMINATION

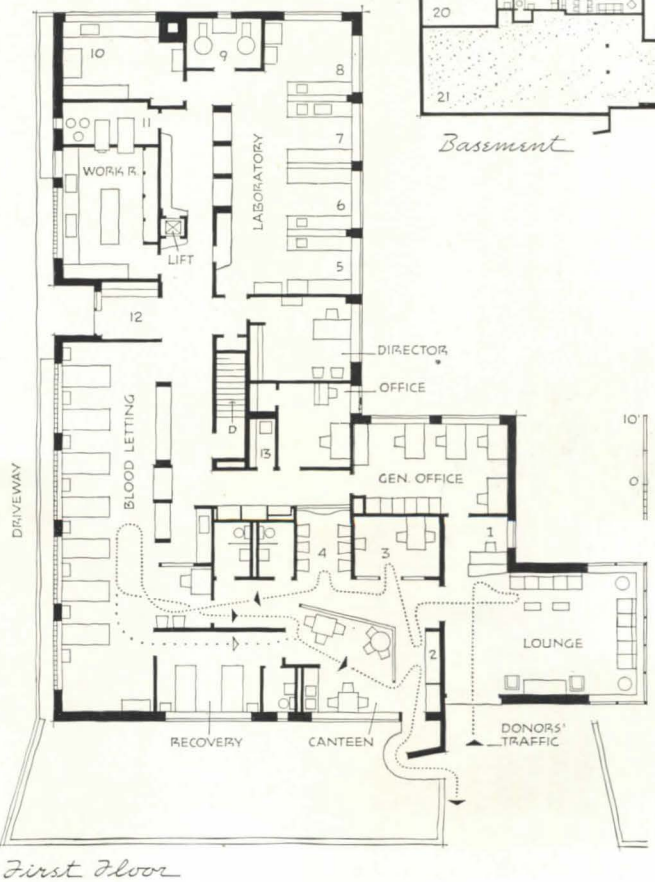
BRADY & JOHANSON and JOSEPH WOHLEB, Architects

Although the separation of the offices of the director and his secretary seems awkward in plan, this apparently is not the case; he calls his secretary by intercommunicating phone.

CANTEEN (right)

1 RECEPTIONIST
2 COATS
3 EXAMINATION
4 WAITING RM
5 CROSSMATCH
6 TYPING.
7 WASSERMAN
8 RESEARCH
9 CENTRIFUGE
10 POOLING
11 AUTOCLAVE
12 VOLUNTEER WORK RM
13 JANITOR
14 BOILER RM
15 PARKING
16 STORAGE
17 RECEIVING
18 LAUNDRY STORAGE
19 NURSE
20 GEN. STORAGE
21 UNEXCAVATED
22 LOUNGE

Basement



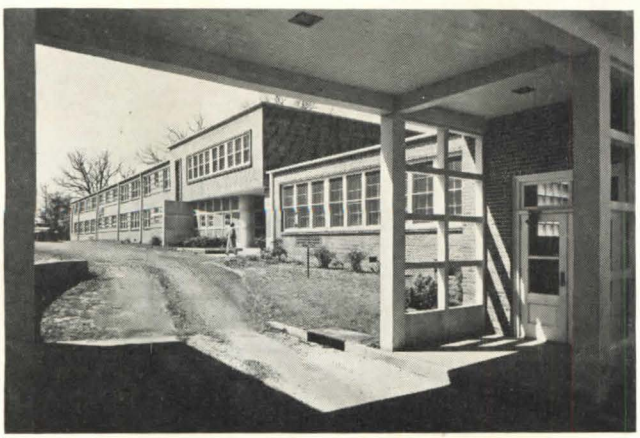
First floor

GENERAL VIEW. Hospital in background, at left.

6 . . . NURSES' HOME, MEMORIAL HOSPITAL, ANNISTON, ALABAMA

CHARLES H. McCAULEY, Architect

PROBLEM: To provide a nurses' residence and training school in a building separate from, but related to, the existing hospital. Built during the war, the building was also designed to serve an active training program for Cadet Corps nurses.



Rodney McCay Morgan Photos

EAST FRONT. Breezeway to hospital, foreground.

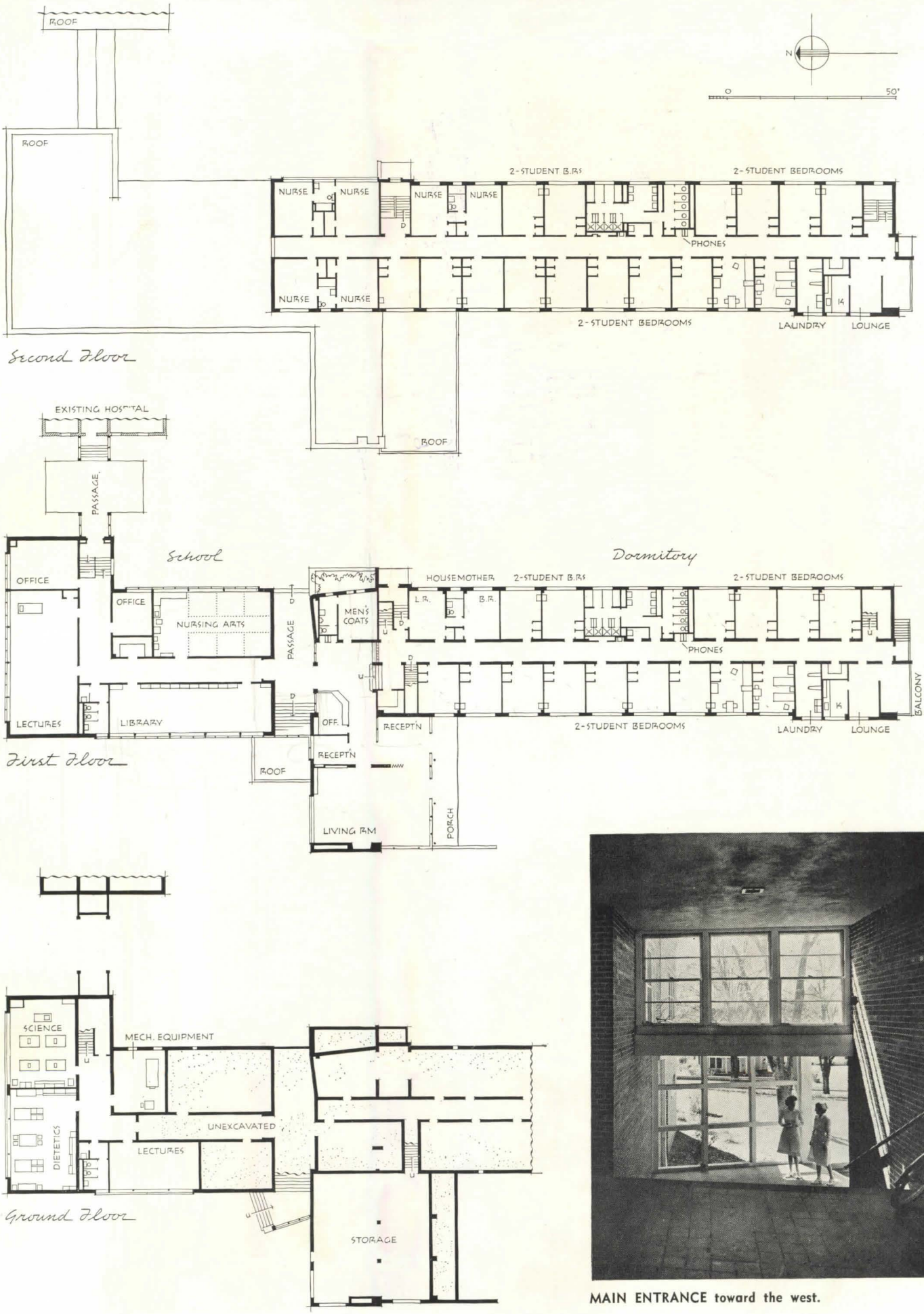
SITE: A pleasant hillside on the grounds of the Anniston Memorial Hospital.

MAIN POINTS ADMIRED: The logical separation of school and residential facilities; the studied relation of the whole building to the site and to the hospital it serves; the efficient layout of the various units, which closely follow U. S. Public Health Service recommendations.

CHIEF POINTS QUESTIONED: Choice of double rather than single student rooms; a feeling that, purely from the esthetic viewpoint, the east elevation of the building was composed of too many diverse elements.

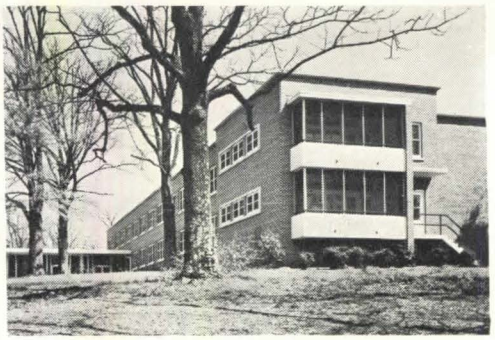
"We have two students to a room in this part of the country," Mr. McCauley states, "for two reasons: (1) the majority of our students come from smaller communities (usually have been accustomed to studying in a room with members of the family present) and are happier in their environment to have someone in the room with them . . . (2) single rooms would have increased the cost considerably."

Although U. S. Public Health Service standards were closely followed in the design of the separate elements, the slope of the land and the desirability of separation of school and residence facilities resulted in a three-level building with two floors of dormitory rooms in the south wing and two floors of school facilities in the north (downhill) wing.



MAIN ENTRANCE toward the west.

TERRACE beside the main living room.

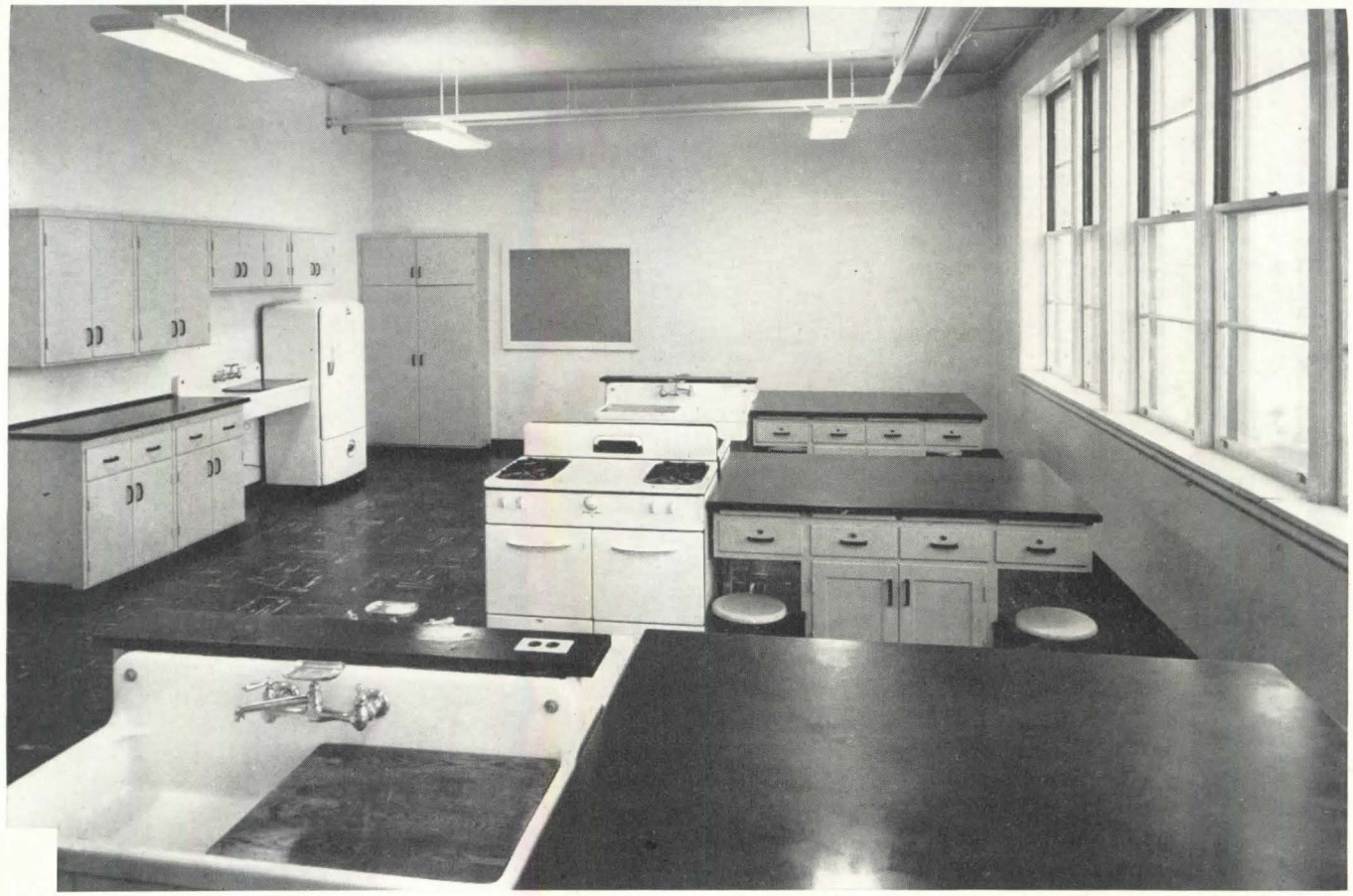


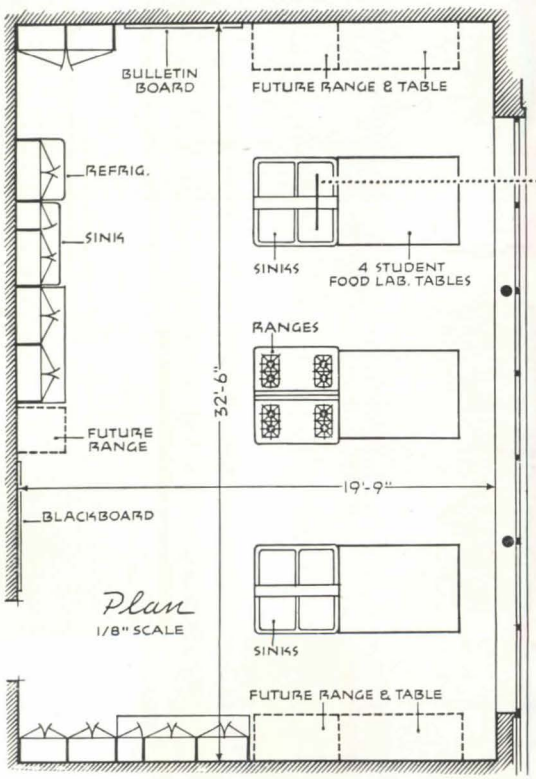
6 . . . NURSES' HOME, MEMORIAL HOSPITAL ANNISTON, ALABAMA

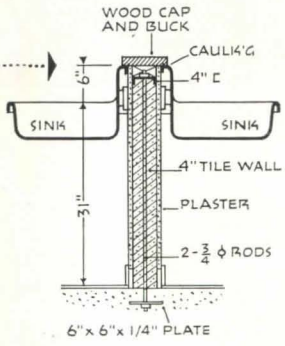
CHARLES H. McCAULEY, Architect

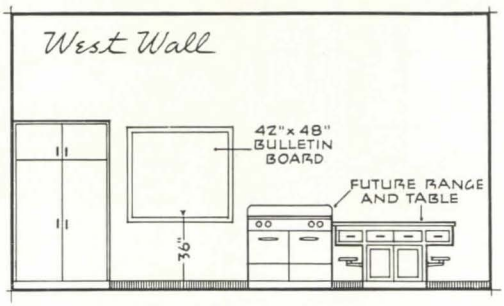
While the residence is connected with the hospital on the east, a main entrance, plus doors to the general living room, enables nurses to enter or leave the home without passing through the hospital. The home portion of the building is planned to keep social activities quite separate from sleeping rooms. In addition to the big main living rooms, a small lounge and sitting porch are provided on each floor for the use of nurses who live on that floor. Floors and roof are concrete slabs; walls are load-bearing tile, with brick exterior veneer.

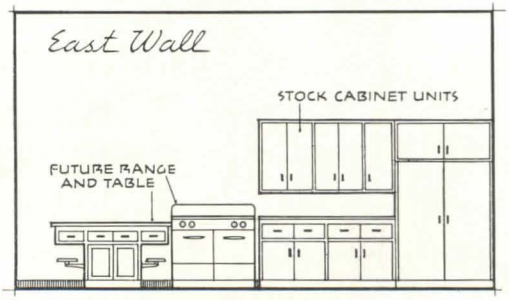
LIVING ROOM is equipped with a big fireplace and a terrace on the south that is protected from too much sun by a roof overhang.

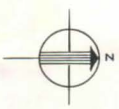


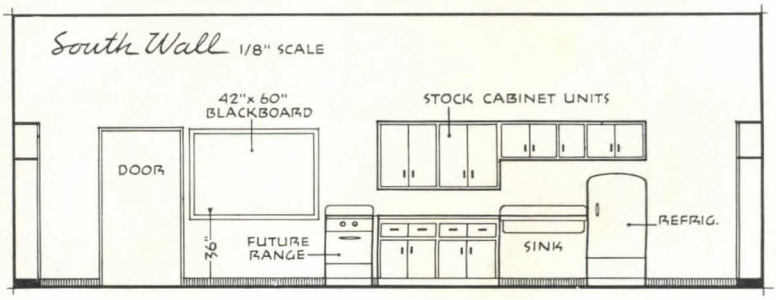










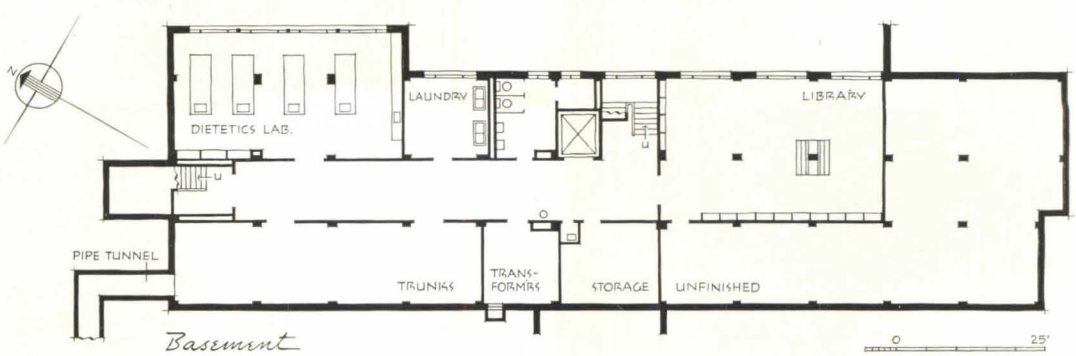


DIETETICS LABORATORY

NURSES' HOME, ANNISTON, ALABAMA
CHARLES H. McCAULEY, Architect

GENERAL VIEW. New classroom wing will be built out from corner at left.

7 . . . NURSES' HOME, ST. BENEDICT'S HOSPITAL ST. CLOUD, MINNESOTA



LONG & THORSHOV, INC., Architects

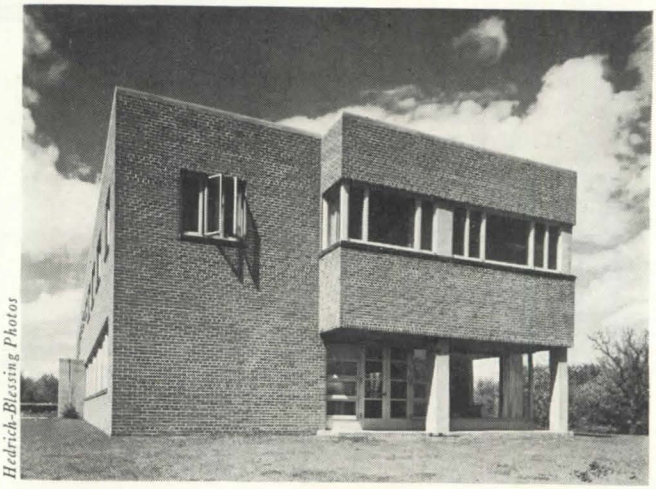
PROBLEM: To provide a nurses' residence and training school (later to be considerably more than doubled in size) which, when expanded, will require a minimum of structural or plan revision.

SITE: Grounds of St. Benedict's Hospital, a short distance from the main buildings.

MAIN POINTS ADMIRED: Simple, straightforward arrangement of plan elements, with individual rooms balanced around central services; light and spacious typical bedrooms.

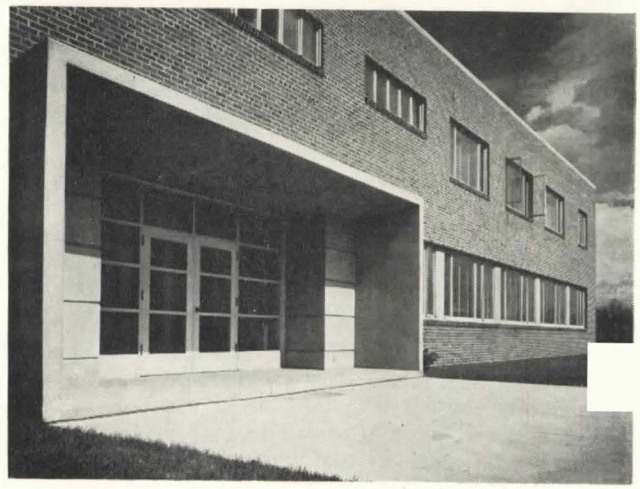
CHIEF POINTS QUESTIONED: Whether four lavatories are sufficient for use by 30 persons; why no lecture room; an apparent confusion between service and school areas at the basement level. One juror wondered whether a nurses' "home" should have a more residential character.

In answering questioned points, the architects say: the eventual building will include addition of four bedroom floors; a large auditorium at the south end of the present structure; and a classroom wing, extending from the northwest corner of the building out toward the street. This last explains the present somewhat makeshift arrangement of classrooms in the basement; when the building is complete, the basement will be entirely used for storage, trunk rooms, laundry, etc. The nurses who live here work on staggered shifts; hence four lavatories in washrooms are considered sufficient.

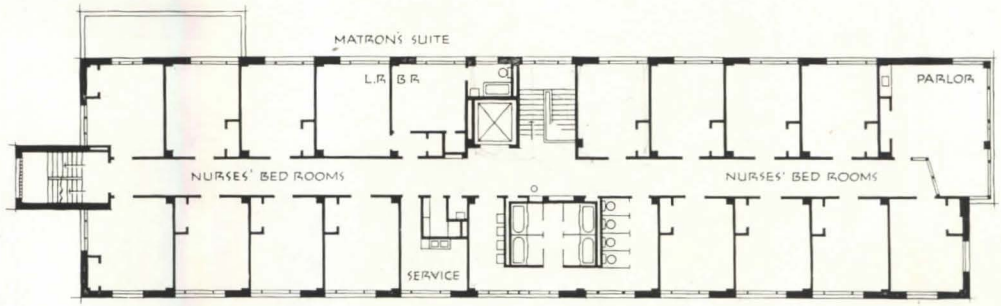


Hedrich-Blessing Photos

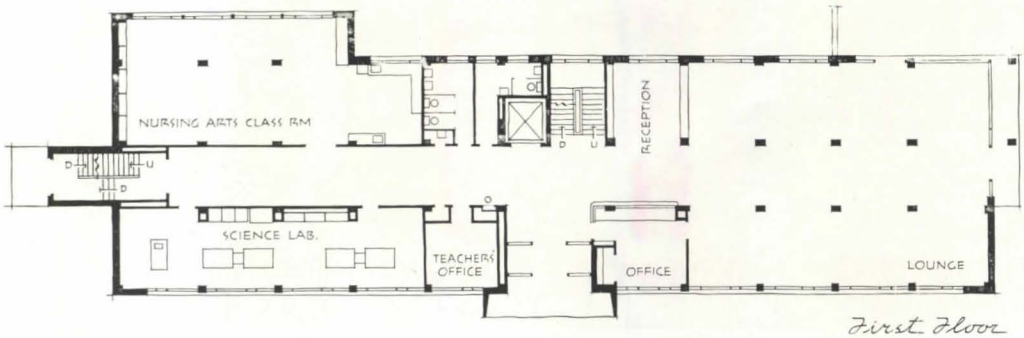
SOUTHERN END



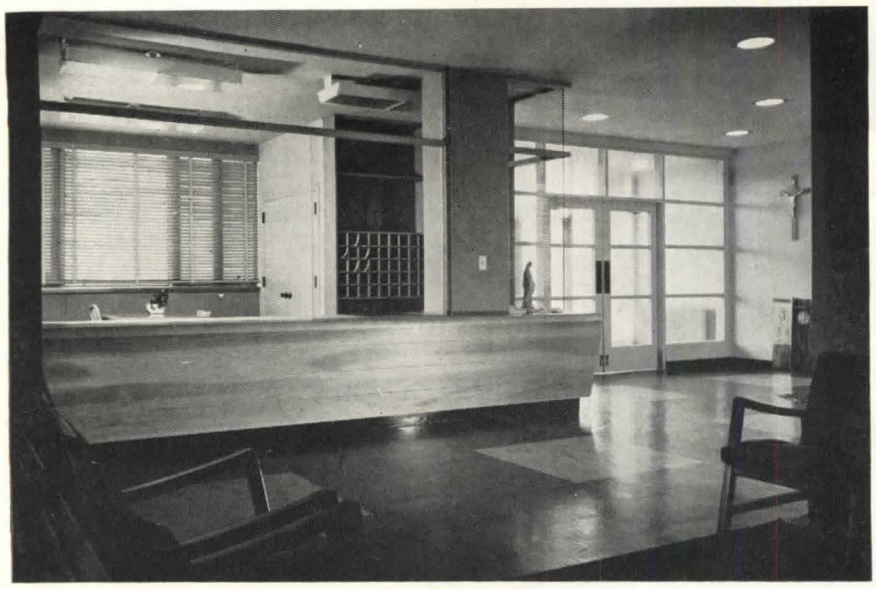
ENTRANCE



Second floor



First floor

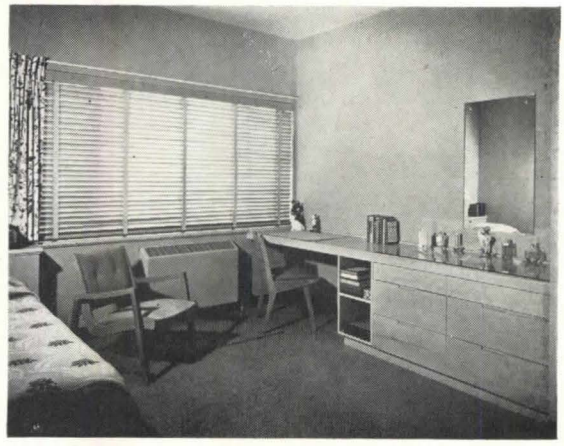


LOBBY, looking toward entrance: woodwork is birch; flooring, asphalt tile.

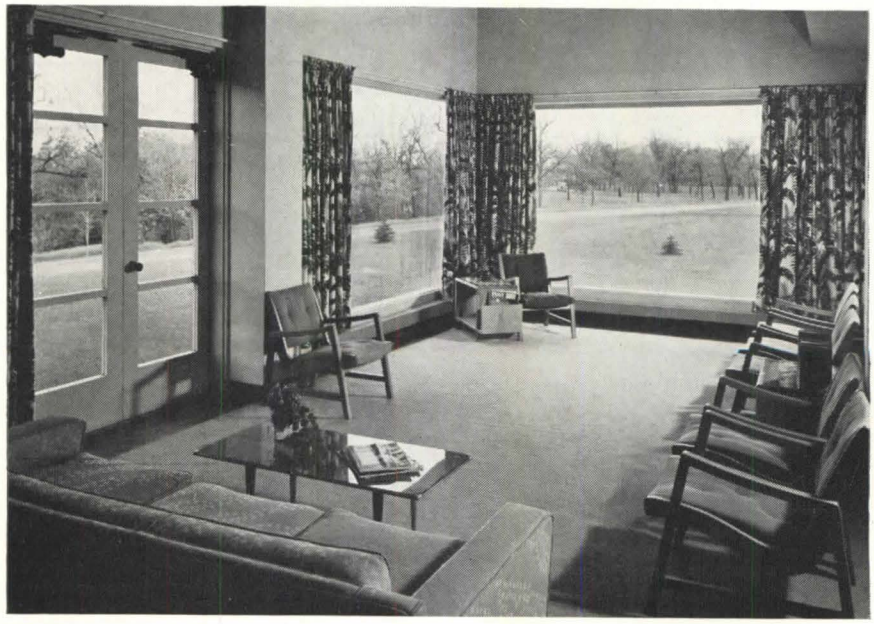
7 . . . NURSES' HOME, ST. BENEDICT'S HOSPITAL, ST. CLOUD, MINNESOTA

LONG & THORSHOV, INC., Architects

The building is a reinforced concrete frame structure with floor slabs of the same material; filler walls are surfaced outside with brick and (in general) plastered inside. Most floor surfaces are asphalt tile; terrazzo is used for corridors and stairs; and ceramic tile occurs in bathrooms. Partitions between rooms are of clay tile. When the auditorium is added at the south of the building, a portion of the present lounge will be used as corridor to the new unit, and the lounge will be extended toward the east, to include alcoves for visiting friends and relatives.



TYPICAL BEDROOM. Note built-in furniture.



LOUNGE. Windows at left (east) overlook a river view.

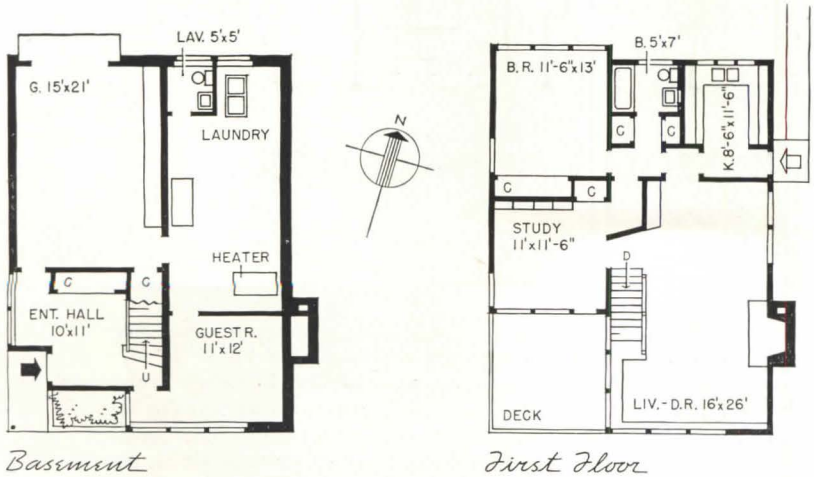
Hedrich-Blessing Photos

HOUSE, MINNEAPOLIS, MINNESOTA

ELIZABETH and
WINSTON CLOSE
Architects

This house, built on two levels on a wooded hillside site, is the home of a professor of psychology and his wife. Main living rooms all occur on the upper level, with the entrance hall, garage, heater room, storage space, and one bedroom (for guest or student) on the lower floor. This not only places main rooms so as to take best advantage of the view, but it provides at ground-floor level a "weatherproof" entrance hall that is entered directly from both the front door and the garage (see plans, next page). The house is of standard frame construction, with exterior finish of plain 6-inch redwood siding, and trim painted light yellow. The concrete block of the ground story is painted light ochre and planted with vines. The house is thoroughly insulated.

VIEW FROM SOUTH



Basement

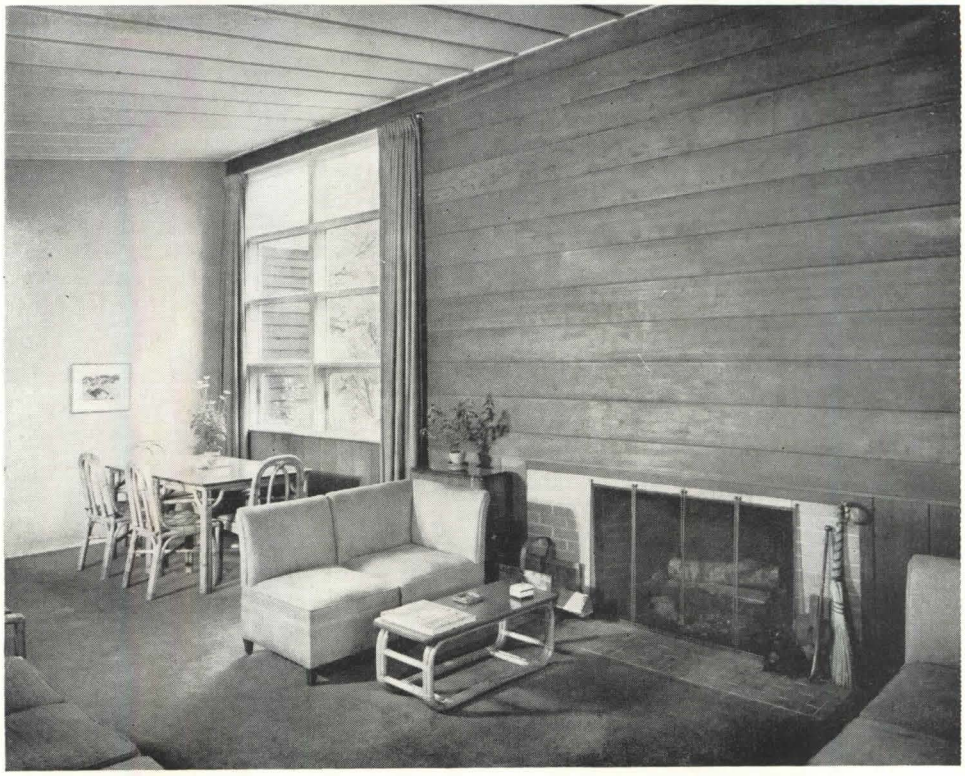
First Floor

FRONT DOOR. Sitting deck, above.

HOUSE

MINNEAPOLIS, MINNESOTA

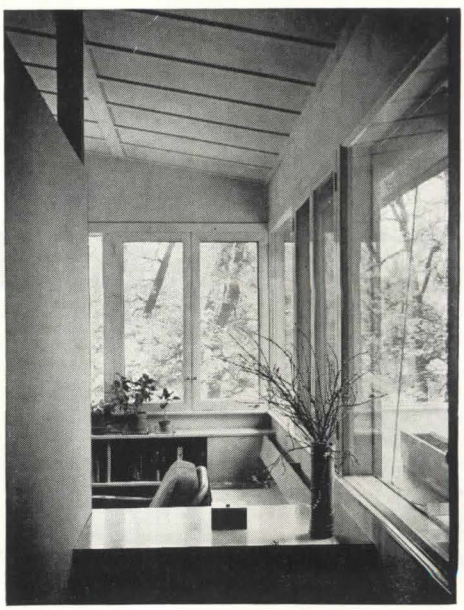
ELIZABETH and
WINSTON CLOSE
Architects



DINING END of living room

Specific needs were an entrance area of generous size and sufficiently apart from main living rooms so that rain and wintry winds would not penetrate; a combined living-dining space; a study opening off the living room; master bedroom, preferably adjoining the study, a compact kitchen, and an oversized garage to allow space for metalworking tools and equipment. A study of the plans shows how these elements were incorporated in an economical scheme. The kitchen door is at ground level on the uphill side of the house, thus avoiding much stair climbing.

LIVING ROOM: Door-height screen, right.



STAIR WELL (foreground), behind screen

One technical aspect of hospital planning—the provision for the many items of specialized equipment—remains a closed book to designers new to the field. The mention of sterilizers, fume hoods, mangles, or steam kettles gives even many experienced hospital architects a cold chill. The following outline is intended to dispel some of the fog that obscures this subject. It is not a check list or an exhaustive study—it is simply an introduction to the subject, to allow the architect to study further with some feeling of background knowledge.

The more specific discussions that follow the introduction by Mr. Arrowsmith and Mr. Rannells are based in part on data supplied by Mr. Leo E. Oakey, American Sterilizer Co.; Mr. L. W. Smack, E. H. Sheldon & Co.; Mr. F. J. Knauf, John Van Range Co.; Mr. Howard L. Post, food service consultant; Mr. Paul J. Abrams, American Laundry Machinery Co.; and Mr. W. Bruning, Picker X-Ray Corp.

Don't Be Afraid of HOSPITAL

INTRODUCTION

By LEIGHTON M. ARROWSMITH and JOHN RANNELLS

It is quite understandable that an architect who has received a commission to plan a hospital approaches the project with some trepidation when he finds that the contract includes provision for many items of fixed equipment with which he is not familiar. He has on his staff or associated with him experts in construction, steel, heating and ventilating, electricity, color, and finish. But when it comes to technical equipment which in turn involves medical procedures, he realizes that no one on his staff has made the type of study which is necessary for a really finished job. He finds himself faced with a line of research well removed from his main function. He may feel that it is an imposition and not quite fair.

A second strike against the architect is the lack of hospital standards—standards in procedures and standards of equipment. Some years back it was found that there were 900 different sizes of ward beds in 1900 hospitals, and only three measurements were involved. There is now a standard which allows one length, one height, and three widths. Again, there were over 5,000 sizes and types of surgical dressings—which have now been reduced to less than 30 through the cooperation of several organizations. These examples show what can be done, but it must be acknowledged that there are far too few items of equipment that have gone through the mill, while medical procedures are always subject to developments which in turn affect equipment and layout.

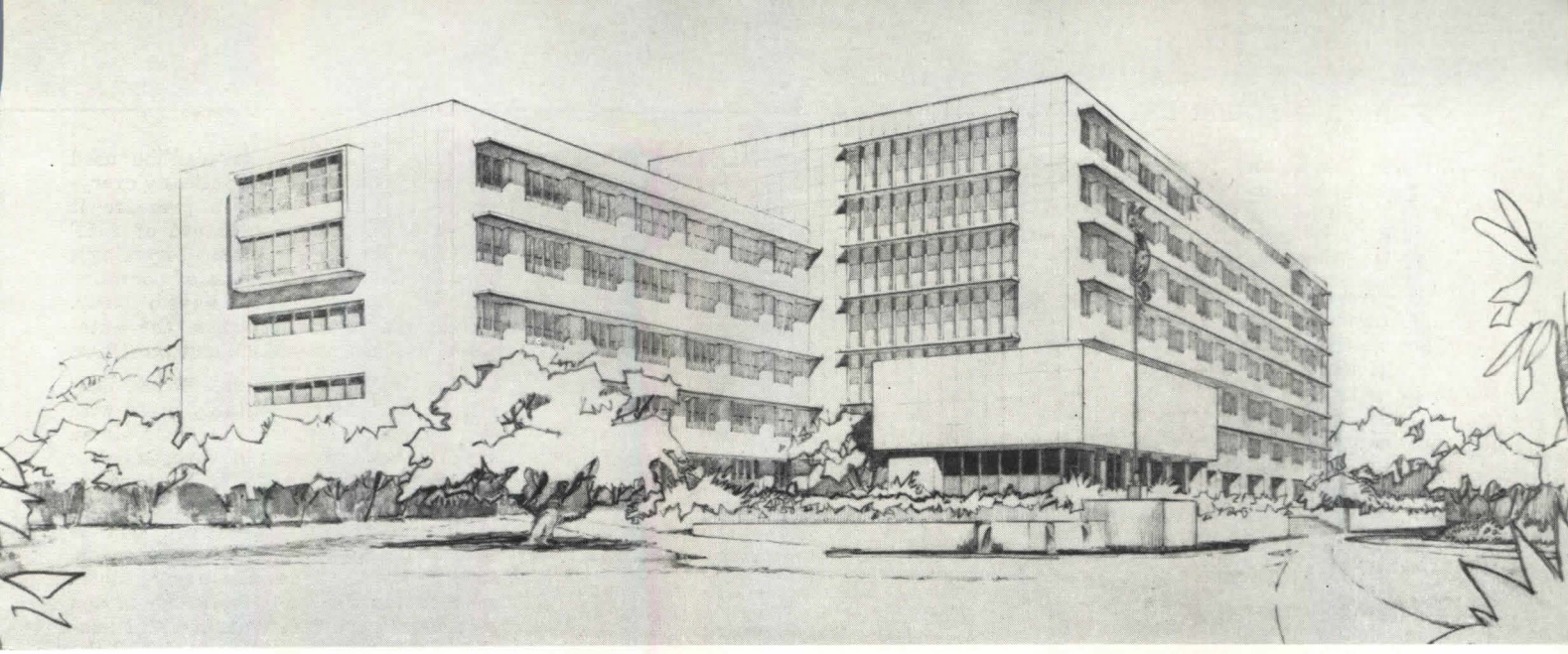
The American Hospital Association has recognized the difficulties inherent in the lack of concerted thinking and has published a *Manual of Standards* of hospital equipment and supplies, which is a compilation of standards taken from various governmental agencies together with some developed by the Association. The Division of Hospital Facilities of the United States Public Health Service has published a wealth of detailed material on layout and equipment. Its type plans show everything required in each room of hospitals and health centers of certain types and sizes. Of course, all such standards have to be evaluated in terms of the project at hand, and it's up to the architect to include what is required in his plans and specifications for each particular job.

There is possibly no function in the operation of a hospital that needs more careful study of equipment than the service of food to patients. To some extent this is a hotel function. It is such through the preparation and cooking periods; but after that it becomes a matter of getting the food to the patient in a way which will not detract from qualities that a patient looks for, such as appearance, taste, heat, and cleanliness.

The dietitian who will operate the food service should certainly be called in to help plan not only for the equipment to be used but also the method of transportation and the layout of the serving pantries. She will probably suggest the methods most familiar to her, which may or may not fit in with the building plans. Her cooperation is needed, but her advice is not necessarily the result of wide experience. A specialist in kitchen layout and equipment should also be consulted.

Food service specialists are usually employed by kitchen equipment manufacturers, and they are willing to advise and consult with the architect, the superintendent, and the dietitian. There are also available free-lance specialists, "food service consultants," who are free to think beyond the policies of a particular manufacturer. Consulting fees are usually reasonable and may be based on a daily or hourly rate. Frequently the consultant's fee is agreed upon and included in the architect's fee as a lump sum or outside price. If the consultant is retained for the very preliminary stages of planning, his advice may save much more than his fee.

The laundry is also a hotel function; most architectural firms have ready access to advice on layout and equipment. However, the hospital laundry must be geared to handle not only bed and table linen but also a large amount of personal clothing and uniforms. A detailed study may show that the wear and tear on linen and clothing, run countless times through washers and extractors which are not "self-dump-



THE VETERANS HOSPITAL PROGRAM continues to account for much of the activity in architectural offices. Above is a rendering of the veterans' hospital for Fresno, Calif., for which Masten & Hurd, Huber & Knapik are architects-engineers. In addition to the usual local structural requirements — earthquake resistance — there were several equipment problems. For instance, because the local climate is seasonally hot, the entire building is air conditioned. Again, storage had to be provided for three months' food supply at a time.

EQUIPMENT

ing," more than makes up for the extra cost of fully automatic machinery. The architect can make such a study or can get help from impartial outsiders. The laundry machinery companies have their own products to sell; their advice will be useful but not necessarily final.

In laboratory and research spaces the selection of equipment depends largely upon the basis on which the hospital is going to be operated. If it is a small institution with the laboratory in charge of a technician and with only occasional visits from a pathologist, no research work will be done and the equipment will center around tables, sinks, and electrical connections for such aids as the technician is able to use. If there is a full-time pathologist, he will list in no uncertain terms the things that will make him happy. The list will be long, but his ideas are important.

The same principle applies to the equipment needed for anaesthesia. A nurse anaesthetist must stick to prescribed routines, but if the anaesthetist is a doctor, he will need additional items to carry on his research projects and his voice should be heard.

The architect cannot go wrong in the selection of X-ray machines if he sticks to recognized manufacturers. The radiologist will probably indicate the make he has been used to, and with any of the top-flight machines the grade of his work will be in line with his ability. It would be well in any case to decide on the manufacturer before the building plans are set. Not all machines are interchangeable and failure to decide on one make beforehand may mean ripping up the floors, or at least changing the plans, to reset conduits and junction boxes.

The medical board of a hospital is composed of busy men, but it is difficult to see how they could fail to be of help in planning the equipment in those departments where they do their work. Responsibility for the life of the patient is in their hands, and they surely should have and will want a voice in the selection of the equipment they will have to use. Here will be found a lack of collective agreement; if the architect is to make the final decision, he will need a thorough understanding of what aseptic techniques and surgical cleanliness imply. Without such an understanding it is not easy to see how he can even plan the arrangement of rooms needed in the operating suite, or the layout of a central supply department. Good techniques can be followed only if the layout of space is done with thorough knowledge. The most carefully considered equipment located badly might well be of little use. Men such as Walter and Underwood* have done much for the art of sterilization. A study of their findings will obviate a good deal that might otherwise prove unfortunate.

What does this boil down to? It has been suggested that the architect secure the services of a food service consultant and possibly a laundry consultant, and also that he call in from the hospital the dietitian, the pathologist, the anaesthetist, the radiologist, and finally the medical board. There is no doubt that a hospital can be equipped, and well equipped, by an architect who will take the time to study needs, types, uses, and procedures, and finally to sort out from the welter of conflicting opinions what he believes will give the best results. Has he the time, the patience, and the understanding to bring together the opinions of so many to form a cohesive whole? To be frank, it does not seem that all this necessary study is justified when there are available as hospital planning consultants those who have had a medical background and training in the operation of a hospital, and who are in a position to balance conflicting medical opinion. However, even if a consultant is retained, the architect cannot avoid final responsibility, which implies a fairly intimate knowledge of the uses and functions of the various items of equipment.

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*Carl W. Walter, M.D., Director, Laboratory for Surgical Research, Harvard Medical School, well known for his basic work in evaluating sterilizing techniques; and Weeden B. Underwood, who before his death in December 1946 was Research Engineer, American Sterilizer Co., and author of *Manual of Sterilization*, an authoritative work which has gone through two editions.

STERILIZING EQUIPMENT

Sterilization is any process by which all pathogenic (disease-producing) organisms, including spores, can be completely destroyed. A sterilizer is an instrument effecting this process.

There are several methods of sterilization commonly employed in hospitals. Since sterilization can be accomplished by various combinations of time and moist heat, one method uses direct exposure to steam under pressure; another uses immersion in water at atmospheric pressure. Hot air at a temperature of about 350F, and chemicals, are also used for some articles that could not safely be exposed to moist heat. However, the most commonly used sterilizers fall into two general classifications: the non-pressure boiling water type, commonly called instrument, utensil, or dish sterilizers; and the pressure type, known as autoclaves, dressing, solution, or water sterilizers.

There is no such condition as "partly" sterile. An article is either sterile or contaminated. A commonly quoted authority has published the following thermal death points for resistant pathogenic spore-bearing organisms in direct contact with saturated steam:

Steam Pressure	*Temp.*	*Time*
15 lb	250F	1 min
10 lb	240F	4 min
6 lb	230F	10 min

From this table it is readily apparent that the time required for sterilization increases rapidly as the temperature is reduced. Also it is clear why most steam pressure sterilizers are operated at about 18-lb steam pressure (255F).

Pressure Sterilizers. The time-temperature table shows the advantage of using pressure sterilizers for most purposes. The type of autoclave (a container designed for sterilization by steam pressure) commonly known as a dressing sterilizer, a medium size being 16″ inside diameter by 24″ inside length, provides a machine that can be used for the sterilization of practically everything. Operated at 18-lb pressure it should develop a temperature of 255F (at sea level). Fabrics (dressing), utensils, basins, and flasks of solutions can all be sterilized expeditiously. Fitted with a set of trays, the autoclave becomes an instrument sterilizer.

Boiling Water Sterilizers. Boxes, usually made of Monel, suitably fitted with cover and tray and mounted on a stand, are filled with water; the water is boiled and instruments and utensils are immersed in the boiling water for sterilization. For instruments the box is usually 10″ x 12″ x 22″, and for utensils, 20″ x 20″ x 24″. The sterilizing tables show that at 212F a considerable period of time is required to insure sterilization, but common practice is to boil the articles for about 20 minutes, with the thought that thorough cleansing before sterilization will remove many bacteria, thereby helping to effect sterilization.

LABORATORY EQUIPMENT AND FURNITURE

Hospital laboratories cannot be standardized, but their furniture can. A small hospital may concentrate all of its laboratory work in one room; a large institution may have separate departments for pathology, chemistry, bacteriology, serology, etc., each requiring special equipment. Adjunct spaces may include morgue and autopsy rooms, glass washing and sterilizing room, and animal rooms. The spaces required and equipment needed in them must be worked out with the proper hospital authorities.

Laboratory furniture has been well standardized by the manufacturing industry. While many types of tables, cabinets, and special work counters are available (with sinks or without, with or without compartments under them, with titration stands, etc.), they are largely interchangeable, and should be planned for flexible use. The greatest distinction is in height of work counter; determination should be made whether work to be done requires standing or sitting.

Furniture is available in both wood and steel. While the choice is often a matter of technician's preference, and while wood furniture is somewhat cheaper, steel, for obvious reasons, is usually preferable. Specification (see typical specification following) is extremely important.

Careful consideration should be given to selection of table tops, location and the type of plumbing and electrical services. Various top materials are available, all of which have their own special merits and should be used accordingly. In general there are six types of material available: soapstone, variblack carbonized birch, treated wood fiber, linoleum, and stainless steel. It is poor policy to use one material indiscriminately, because each has its own application. The technicians should be consulted for their personal preferences and a study of the use should be made. Soapstone is probably the most durable, but it affords a cold working surface and due to its hardness increases glass breakage. There are various types of impregnated and treated asbestos materials which afford a high acid and alkaline resistance. Black carbonized birch has been a standard top material for a number of years and gives good service. However, it should not be used where large amounts of water are likely to be spilled. Linoleum affords a pleasing resilient surface but is very subject to damage from heat. Stainless steel is the most expensive of the top materials available and should not be used in areas where acids will be used, particularly hydrochloric acid. It does make a fine top for sterile areas.

The laboratory furniture industry has developed specialized types of plumbing and electrical fixtures which are not generally available to the general plumbing trade. For this reason it is particularly important that these accessories be included as part of the furniture. Generally, drainage plumbing can be of lead. The alternative is silicon iron which is considerably more expensive. Special requirements for gas, electric, and air outlets must be carefully considered.

Although the smaller hospital will not require chemical fume hoods, larger ones will. These hoods can be constructed of soapstone, plain asbestos finished to increase its corrosion resistance. In providing for ventilating the hoods, it will be necessary to provide a separate ventilating system. In determining the size of blowers, it will be necesary to provide a fan of sufficient capacity to evacuate 70 cu ft per minute for each sq ft of hood space opening. In air-conditioned laboratories it is important that this be considered in computing the amount of air to be supplied to the laboratories. Obviously, if this is not done, the fume hood will not work. In large hospitals, where there are large numbers of such installations, pressurized hoods should be considered. This type of hood operates on two fan systems, one supplying approximately 80% of the air from the atmosphere with the other 20% taken out of the room. The use of this type of fume hood will result in a substantial saving in heating and processed air.

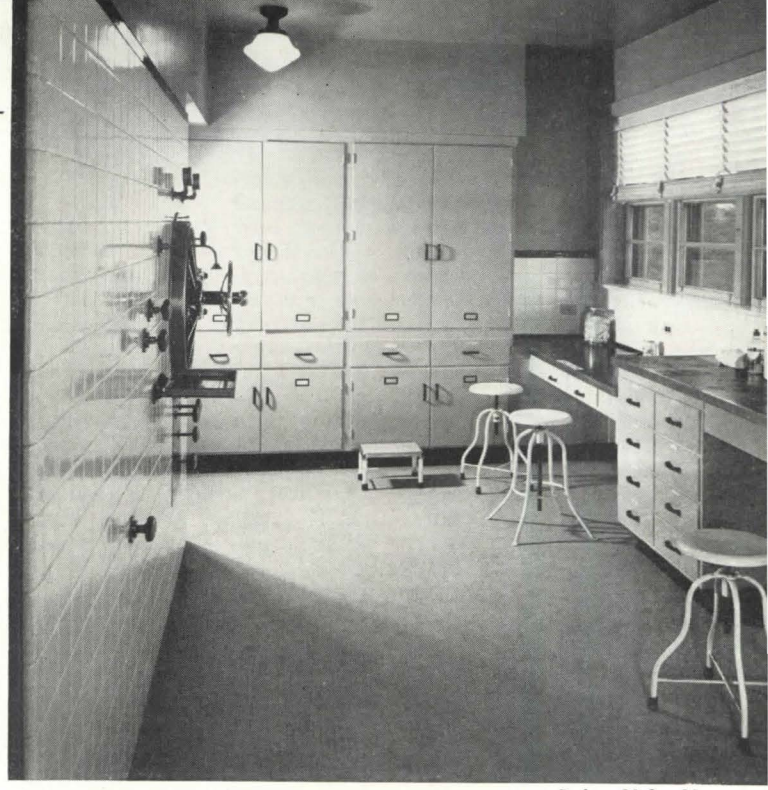
Laboratories may require special sterilizing equipment (small autoclaves, hot air sterilizers). Other special items may be an incubator (perhaps a small table type, perhaps a special room); centrifuge (which whirls at high speeds, may require special structural considerations); special refrigerators. Much laboratory equipment (bunsen burners, balances, microscopes, shaking machines, slicing machines, etc.) consists of loose items, requiring only proper table tops. Peg boards (for glass tubes, bottles, graduates) should be placed where needed.

Autopsy tables, mortuary refrigerators, animal autopsy tables, animal cages, etc., are items which require careful specification. (Many of these items appear in the two installments of the

Cost is less than that of pressure sterilizers; possibility of misuse due to haste may be greater.

Water Sterilizers. Tanks, usually about 15-gal capacity each, mounted in pairs, are used to sterilize water at 18-lb pressure (255F). Water is readily sterilized by heat but is difficult to retain in a sterile condition, due to possible contamination as air enters a tank to replace sterile water being withdrawn. For that reason, it is better practice to use tanks of small capacity and plan to sterilize the water two or three times a day, instead of using large-capacity tanks which would be operated only once a day.

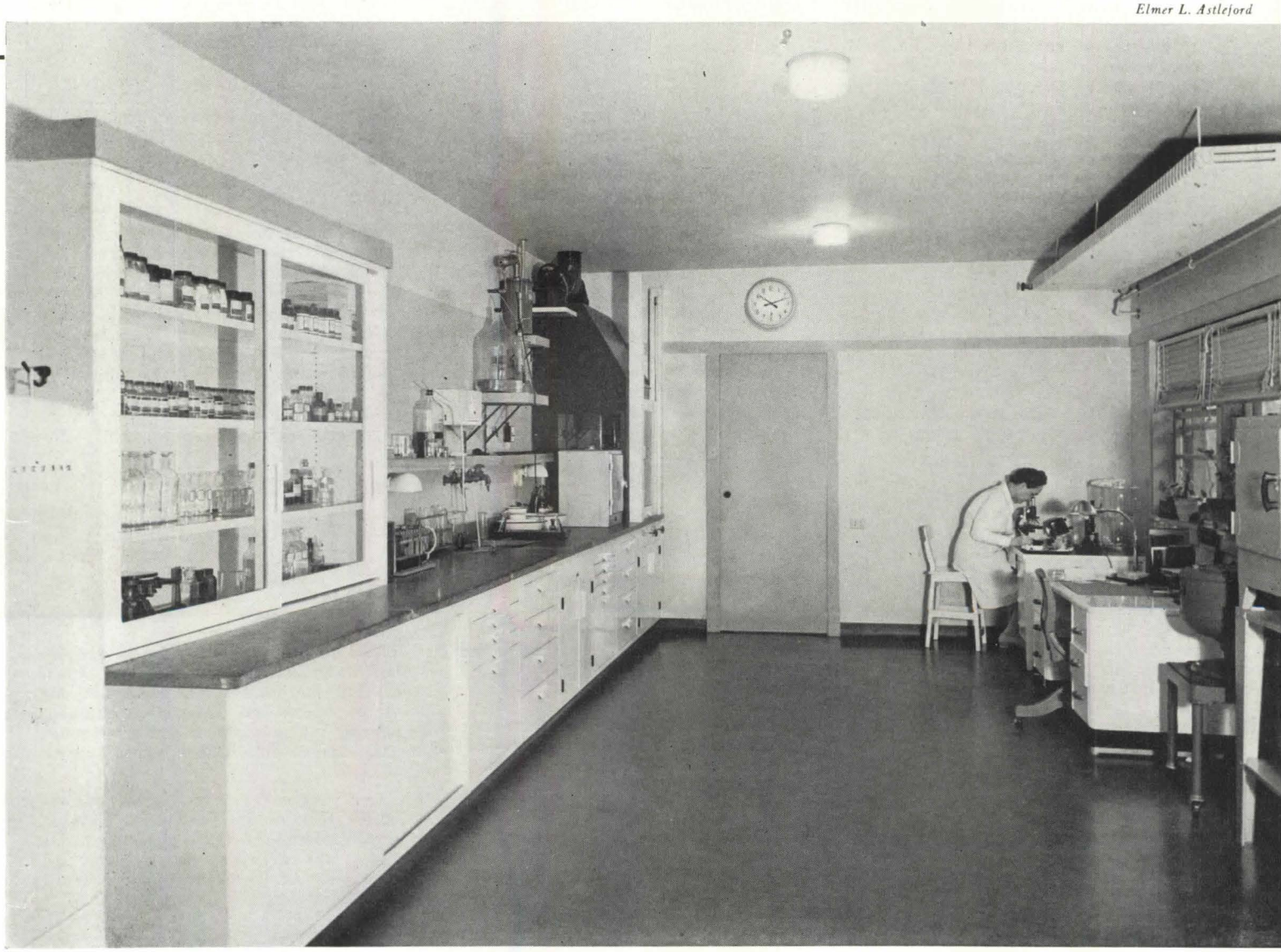
Sterilizers are used principally in connection with operating and delivery rooms (where pressure sterilizers are mandatory), in the central sterile supply room, and in treatment and utility rooms. Laboratory spaces will have special sterilizing requirements.



CENTRAL STERILE SUPPLY room, Sylacauga Hospital, Sylacauga, Ala.; Charles H. McCauley, Architect.

Rodney McCay Morgan

Elmer L. Astleford



LABORATORY, Midland Hospital, Midland, Mich.; Alden B. Dow, Architect.

X-RAY EQUIPMENT

X-ray equipment may be used for diagnosis or for treatment (therapy). Small hospitals are usually concerned only with diagnostic equipment; in larger institutions additional space and equipment may be required for deep or superficial therapy, or both. Diagnosis may be by means of radiography (the taking of pictures) or fluoroscopy (direct visualization). Radiographic and fluoroscopic machines operate usually on 208-220 v, AC, single-phase service, though some types require three-phase service. Current for X-ray purposes should be supplied by an independent system. Equipment must be grounded.

Diagnostic rooms will require radiographic or fluoroscopic generators (200 or 500 MA, 100 KVP capacity), shockproof radiographic X-ray tube (rotating or stationary), tubestand, tilt table (hand operated or motor driven), and a cassette changer or holder. Fluoroscopy requires a darkened room, radiography does not.

Therapeutic rooms will contain a superficial, intermediate, or deep therapy generator (from 12 KVP capacity to—in a few instances—million-volt machines), tube, tubestand, and treatment table or couch.

In each instance the control panel will be located in an adjacent space.

Special requirements may include a cystoscopic room, for genitourinary work, requiring a urological X-ray table; and a fracture room, perhaps calling for a fracture table and a bronchoscopic table. Outpatient X-ray facilities will depend on the planning program. They may include complete diagnostic equipment, may be limited to dental X-ray (usually a self-contained unit assembly), or may develop special equipment needs.

FOOD SERVICE EQUIPMENT

The handling of food for patients and personnel in a hospital is a continuous operation, seven days a week the year 'round. Food is the one medicine that all patients must have. Proper allocation of space (for storage, for work, for equipment, and for traffic) is important in preliminary planning. No rule-of-thumb calculation can be safely used for space requirements—an actual layout must be made. (Queried on this point, one authority said 15 sq ft per person, another, 30.)

Many factors determine the area and type of equipment needed: whether the institution is a general hospital, or specializes in tuberculosis, psychiatry, etc.; whether it is located near a good source of constant food supply, or whether deliveries will be so infrequent that meat must be purchased in large quantities and cut and trimmed at the hospital, and dry stores must be purchased in bulk.

A hospital kitchen is a production line; proper flow is important. Main spaces, with the basic equipment requirements, are as follows:

Receiving, sorting, storage, etc. Scale, bins, racks, shelves, refrigerators (for meat, fruit, vegetables, dairy products), garbage refrigerator, can washer, truck washing equipment.

Preparation. Vegetable preparation requires peeler (with peel trap), two-compartment sink, work table. Meat preparation needs meat block, bench, and sink; perhaps poultry block, bench, and sink, as well as food cutter, fish bench, extra sink, fish refrigerator.

Main kitchen. Main cooking equipment includes ranges, fryers, steam kettles, vegetable steamers (all with vent hood above). Work tables are needed in front of ranges and kettles, in which should be set steam table and bainmarie for serving meats, vegetables, and soups. Perhaps this serving area will have toasters, coffee urns, egg boilers, etc. Food trucks will go from here to elevator. Adjuncts to main kitchen may include bakery (oven, proof box, mixer, sink table), and salad preparation (table, sink, peeler, cutter).

Special diet kitchen. Usually requires its own range, broiler, refrigerator, sinks, work table, etc.

Dishwashing. Dishwasher, glass washers, soiled and clean tables, storage units. Some hospitals prefer decentralized dishwashing in ward serving pantries.

Ward serving pantries. Sizes and equipment will depend on whether trays are loaded on heated trucks in main kitchen, whether food is taken in bulk to floor serving pantries and set up in trays there, or whether food is dished on trays at the bedside, from a food cart. This room may include dishwashing for its nursing unit. Minimum requirements are sink, refrigerator, work counters, cabinets. Allow space for

LAUNDRY EQUIPMENT

A hospital laundry consists of four functional parts, with the following *major items* of equipment:

Washing and extracting. Washers may be of various types, with capacity to handle 100% of the laundry poundage. Extractors take out the excess moisture.

Tumbling. Drying tumblers are designed to render bone dry such material as bath towels, underwear, etc. (about 30%, generally, of the hospital laundry in pounds).

Flatwork. Flatwork ironers iron sheets, pillow cases, hand towels, etc.—65%, generally, of the hospital laundry poundage.

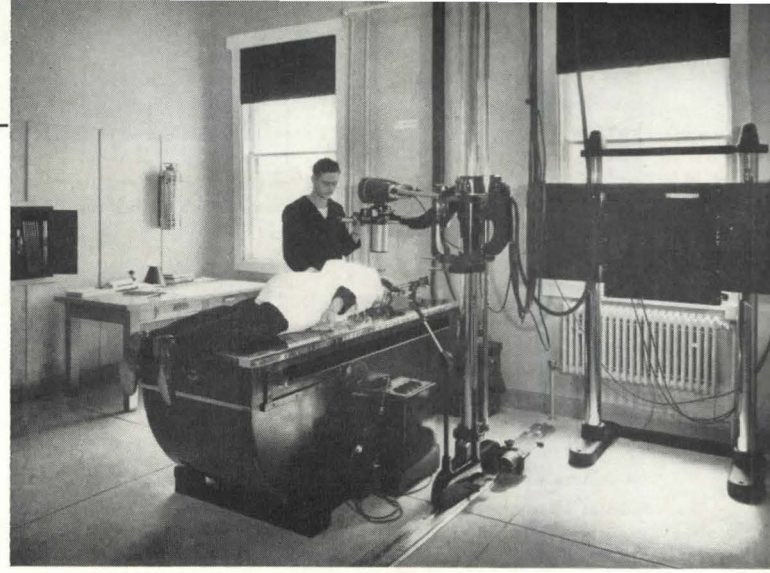
Pressing. Presses are required for ironing uniforms and personal wearing apparel. In most hospitals, this is only 5% of the load.

These major equipment items require hot water at 180F, cold water, steam at 100 lbs, and electric service for motor operation. Adjunct equipment usually includes sinks, ironing boards, soap dispensers, laundry trays, work tables.

The arrangement of the equipment requires such an intimate knowledge of capacities and special requirements that expert advice (which the architect can check) should be secured. For average installations it is wise to allow 12 sq ft

Adjunct spaces and their basic requirements are: darkroom, with loading bench, special storage units, developing tank and sink, film dryer, pass box to radiographic room, etc.; and viewing room, containing stereoscopic, built-in, or fixed illuminators.

There are many possible pitfalls in planning an X-ray department to provide proper protection for patient and staff. Standards should be studied carefully, the process should be understood, and equipment must be satisfactory and properly placed.



X-RAY ROOM, Triborough Hospital, New York; Eggers & Higgins, Architects.

Gottscho-Schleisner

trucks.

The foregoing is not a check list, but indicates principal divisions of equipment needed. Other spaces may need fixed equipment—offices, cafeterias for help and staff, locker rooms, toilets, etc.

There are, of course, hundreds of items of food handling equipment. Most of them are standard in manufacture and can be specified directly. Others may be specially designed to meet particular requirements. The advantage of one manufacturer's product over another's must be weighed and discussed with the dietitian and whatever consultant is used.

For most items, stainless steel is the best material available to withstand hard wear, rust, and food juices. Tables, counter tops, and sinks should be not less than 14-gage. Ranges may be gas or electric. Kettles and steamers operate on high pressure steam. Warmers, urns, and dishwashers can be heated by electricity, or may use the steam service which a hospital needs in any event for sterilizers and laundry equipment.

KITCHEN, Midland Hospital, Midland, Mich.; Alden B. Dow, Architect.

Elmer L. Astleford

Courtesy American Laundry Machinery Co.

in the laundry room for each patient bed in the hospital. For rough estimating a figure of $15.00 per bed may be used for laundry equipment. Surgical, neuropsychiatric, and tuberculosis hospitals have greater loads than the average.

Laundry equipment requires door openings at least 6′-6″ by 7′-6″, and clear ceiling heights of 12′-0″ for individually powered equipment, 14′-0″ for line-shafted motors. Flatwork ironers should be vented by hoods.

LAUNDRY, O'Connor Hospital, San Jose, Calif., showing automatic unloading washer.

Typical Streamlined Specifications for

METAL CASEWORK FOR HOSPITALS – PART I

By BEN JOHN SMALL, A.I.A. Associate, Alfred Hopkins & Associates, Architects; and co-author (with C. H. Cowgill) of the new book, "Architectural Practice"

The editors of PROGRESSIVE ARCHITECTURE present another in the series of streamlined specifications. This example, concerned with the type of hospital equipment loosely called "furniture," has been developed from actual job specifications to the point where it includes nearly every casework item and condition encountered in any hospital building. Casework is a particularly tricky subject; substitutions, skimping, or mistakes are easy to make though difficult to detect. A reliable base specification should prove invaluable. The second and concluding portion of this Specification will appear next month.

GENERAL REQUIREMENTS

1. GENERAL:

A) Applicable provisions of "General Conditions" govern work under this Section.

B) These Specifications are of the abbreviated or "streamlined" type and include incomplete sentences. Omissions of words or phrases such as "the Contractor shall," "in conformity therewith," "shall be," "as noted on the Drawings," "according to the plans," "a," "an," "the," and "all" are intentional. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings.

C) The Contractor shall provide all items, articles, materials, operations or methods listed, mentioned or scheduled on the Drawings and/or herein, including all labor, materials, equipment and incidentals necessary and required for their completion.

2. WORK INCLUDED:

A) Metal casework and miscellaneous equipment indicated, specified or both.

B) Items required under this contract are indicated M-1, M-2, M-3 and so forth.

3. RELATED WORK NOT INCLUDED:

A) Furring and lathing.

B) Hollow metal.

C) Raised masonry platforms including finish thereof.

D) Rubber bases on equipment items.

E) Plumbing equipment, water supply and gas fittings such as gas, air and vacuum cocks, water valves, drains, faucets, fittings of every nature, rough and finished piping unless otherwise specified.

F) Steam valves, fittings, rough and finished piping, steam and ventilation work of every nature unless otherwise specified.

G) Electrical equipment, appurtenances, motors, fittings, conduits, cables, wiring, outlet boxes, switches, lights, receptacles and electrical work of every nature unless otherwise specified.

H) Sterilizing equipment.

I) Metal cabinets and miscellaneous equipment indicated as "N.I.C." (Not in contract).

J) Wood cabinets.

K) Equipment, counters, hoods, tables and sinks in connection with kitchens, pantries, cafeterias and food preparation areas.

4. MANUFACTURER'S QUALIFICATIONS AND APPROVAL:

A) **Work described herein:** by manufacturer who has in operation sufficient size plant with necessary tools, dies, equipment, engineering personnel to make required equipment without sub-letting fabrication of any part thereof.

B) **Submit proof** that (1) manufacturer has equipment, skill, experience, financial resources to handle work in satisfactory manner (2) can deliver material in such quantities as not to delay building progress.

C) **Submit manufacturer's name** before awarding contract. Architect's decision: final; make no award without his consent.

D) **Equipment:** equal to quality as made by Herring-Hall-Marvin Safe Company, Art Metal Construction Company or The General Fireproofing Company.

5. WORKMANSHIP SAMPLE:

A) As condition precedent to contract award, and to determine work quality and character, submit within 15 days after notification such full size samples of any part of work which in Architect's opinion is required to adequately judge work quality and character.

B) If samples do not conform to contract intent they will be rejected. Upon notification, remove rejected samples.

C) If samples are approved, they may be used as part of required equipment.

7. MEASUREMENTS:

A) Within 30 days after contract award, submit, in triplicate, large scale shop drawings of each item indicating construction details, metal gages, adjacent wall and floor conditions, building base dimensions, roughing-in requirements for mechanical and electrical work and the like.

B) Prepare schedule indicating numbers of items, floors, rooms, spaces, also Architect's drawing number on which affected items appear.

7 MEASUREMENTS:

A) **Verify dimensions and conditions at job.** Cooperate with others whose work bears relation to or comes in contact with required work.

8. SUPERVISION:

A) Place competent, experienced representative in charge to supervise, coordinate, expedite work.

B) **Representative:** devote his time exclusively to field work until completion and acceptance thereof.

9. INSTALLATION:

A) **Deliver, position, install equipment** at times when construction, finish, mechanical and electrical work have advanced to state ready to permit equipment installation.

B) **Cut, fit, drill, tap** work to accommodate mechanical, electrical and other contiguous work. Obtain from those requiring same and be responsible for exact locations of required penetrations. Patch, scribe to fit work to adjacent surfaces. Furnish tap screws, bolts, metal fillers, fittings, appurtenances to complete and finish work in every detail as approved.

C) **Remove, dispose of cratings, protective coverings.** Keep premises clean, free from waste materials, rubbish of every nature arising from work. Do not permit accumulation of waste materials, rubbish.

D) **During work installation** and until completion and acceptance thereof, adequately protect work from injury or damage to finish. Remove damaged or defective work; replace with new.

E) **After completion** and before Architect's final inspection, remove protective material, clean items free from defects, blemishes.

MATERIALS AND FINISHES

1. METALS—IN GENERAL:

A) **Metals:** free from defects impairing strength, durability, appearance. Sections, shapes: rolled, die-formed, drawn or pressed as required. Molded work: sharply defined profiles, clean, straight, true. Plain work: level, straight, true, smooth. Edges, angles, corners: square, sharp.

2. SHEET STEEL:

A) **Sheet steel:** prime grade cold rolled furniture steel, known to trade as metal furniture stock. Sheets: free from dents, buckles, deep scratches or other injurious defects. Angles, flats, tees, channels, leg moldings, other required shapes: cold rolled, formed sheet steel.

B) **Finish:** finish steel with acid, alkali, solvent, water and abrasion resistant baked enamel paint of approved color. Steel parts to be enameled: thoroly cleaned before finishing; framing parts: made smooth; plate surfaces: well sanded; give entire item benzine bath to remove oil, dirt; follow with well baked mineral filler coat, applied by dipping or spraying to insure covering all surfaces; this to be thoroly rubbed down to smooth even surface, coated with best baking Japan, baked at temperature of 150 to 300 degrees F dependent on color. Number of coats: determined by color. Furnish certificate from approved laboratory to effect that enamel finish on steel meets following tests. Ratios are by volume.

1) **Immersed in solution 18 hours at 70 to 80 degrees F.**

Cold Water	No effect.
Nitric acid C.P. concentrated: one part; water: 9 parts	No effect beyond slight softening, slight discoloration.
Sulphuric acid, C.P. concentrated: one part; water: 2 parts	No effect.
Sodium chloride, concentrated	No effect.
Sodium Hydroxide, 10 per cent solution	No effect beyond slight softening, slight discoloration.

2) **Immersed in solution 15 minutes at 70 to 80 degrees F.**

Acetone	Some loss of gloss,

It is recommended that this work be prepared as a separate contract whenever possible.

	slight softening permissible, but coating must remain intact.
Acetic Acid	No effect beyond slight softening.
Alcohol (ethyl) 95 PC	No effect beyond slight softening.
Ethel (ethyl)	Slight softening, but when dried, coating: uninjured.
Xylol	No effect beyond slight softening. Coat not injured, except slight dulling effect after Xylol disappears.

3) **Immersed in boiling solution.**

Sodium Hydroxide: for one minute, 10 per cent	May cause slight discoloration and attack a little, but coating: neither pierced nor removed.
Water: two hours	No effect.

C) **Give angle type shelving** one baked enamel coat unless required to be galvanized.

3. STAINLESS STEEL:

A) **Stainless steel:** Republic Steel Corp.'s "Enduro 18-8," U.S. Steel Subsidiaries' "U.S.S. 18-8" or American Rolling Mill Co.'s "Armco Type 302."

B) **Finish:** 4.

C) **Option:** Where stainless steel is required, Monel metal may be used in lieu thereof. Monel metal: contain approximately 2/3 nickel, 1/3 copper. Gages, finish: as required for stainless steel.

4. GALVANIZED IRON:

A) **Galvanized iron:** American Rolling Mill Co.'s "Armco Ingot Iron" or Republic Steel Corp.'s galvanized "Toncan Iron."

5. BRONZE:

A) **Bronze:** best grade commercial stock, suitable hardness, color uniformity. Extruded: 3/32" thick. Drawn or formed: 1/16" thick. Cast: 3/16" thick, fine texture, free from blow holes or other defects impairing either durability or appearance, sharp true lines, accurate profiles.

6. LEAD:

A) **Lead:** A.S.T.M., B29.

B) **Sheet lead:** rolled to exact required thickness, not vary therefrom more than 3% over entire surface.

7. GLASS:

A) **Clear:** for cabinet doors not otherwise indicated, clear window glass, double strength, "A" quality, set in approved felt.

B) **Obscure:** best quality, rolled figure pattern, hammered surface or ribs, pyramids or other approved obscure pattern, 1/8" thick, set in approved felt, with smooth surface on side as directed.

C) **Plate:** good color, highly polished, "glazing" quality, not less than 1/4" nor more than 3/8" thick. Glass shelves up to and including 18" by 36": 1/4" thick; over this size: 1/2" thick. Ends, rear edges: ground smooth; front edge: ground, polished. Where required, plate glass: bent to radii or indicated contours. Cut out hand and speaking holes; grind, polish edges thereof including that of sheets.

D) **Clear wire:** not less than 1/4" at thinnest point, Mississippi Glass Co.'s "Misco Polished Wire Glass" or Blue Ridge Glass Corp's "Nuweld Polished Wire Glass."

E) **Mirror:** No. 1 quality, CS-27 for "Plate Glass Mirrors," 1/4" thick. Back: thoroly silvered, heavily electroplated with copper, given two coats best quality varnish, lacquer or dampproof paint as approved.

F) **Structural:** 1/2" thick, polished, milk white color, Pittsburgh Plate Glass Co.'s "Carrara," set on 1/16" thick approved felt.

8. SOAPSTONE:

A) **Soapstone:** natural impure talc, blue gray rock, free of lamination, stratification, cleavage, homogeneous, except for minimum veinings, finely granular in all directions; calcite or solid carbonate veins: not permitted; solid, free of chipped or broken pieces; jointing and patching of broken or chipped sections: not permitted. Furnish certificate from approved laboratory to effect that soapstone has following physical properties:

1) **Modulus of rupture** in any direction: 2000 lbs. per square inch minimum.

2) **Abrasive hardness** (ha) as determined by National Bureau of Standards: at least 4.5. Pharmacy sink fixture: minimum hardness of not less than 16.

3) **Maximum water absorption** by weight: not over .20 of one percent.

4) **Under abrasive use:** wear to surface similar to coarse sandpaper, shall not scale, spall nor show exposed elongated crystals.

5) **Highly resistant** to actions of chemicals, particularly acids, also those salts that expand when drying out of solutions.

6) **Following minima equalled or exceeded:** upon immersion for 30 days in mixture of sulphuric and chromic acids, sample shall not lose more than three per cent by weight when ratio of exposed surface to cubic content of specimen is not less than 5 1/3. Acid solution: made of 2000 c.c. concentrated sulphuric acid, 270 grams potassium bichromate, 350 c.c. water.

7) **Soapstone:** type that has demonstrated, in actual use, successful resistance to action of chemicals that expand when drying out of solutions, such as sodium hypochlorite.

B) **Finish.** Exposed faces, edges: honed. On completion of soapstone work: clean thoroly, treat with wax-oil dressing mixed as follows—one pound paraffin wax, one quart kerosene oil, 2 quarts raw linseed oil, lampblack to approved shade. Melt wax in hot kerosene oil, cool mixture, add hot linseed oil, lampblack. Slight thinning with additional kerosene oil permitted if mixture is too thick for application. Use sufficient lampblack to produce nearly black color. Saturate surfaces for two hours, rub off, leave dry, free from wax-oil excess.

C) **Litharge and glycerine** for soapstone work: made to paste consistency with fresh material, colored with lampblack to match finished soapstone.

D) **Calking** for soapstone work: approved mastic, color to match finished soapstone.

9. WOOD:

A) **Maple:** clear, best quality, straight grained, hard, free from imperfections; sand smooth.

B) **Birch:** selected, close grain, northern yellow, free from imperfections; sand smooth.

C) **Finish on maple and birch:** linseed oil, apply in three applications, allow to dry after each, rub excess, buff surface.

D) **Carbonized birch:** acid-proofed carbonized finish as follows (by weight):

Coat 1:	
Iron sulphate	4 parts
Copper	4 parts
Potash permanganate	8 parts
Water	84 parts
Coat 2:	
Aniline (oil or salt)	12 parts
Hydrochloric acid	18 parts
Water	70 parts

Apply two hot films of Coat 1, second as soon as first is dry. Remove last coat excess when dry. Apply two films of Coat 2. Dry thoroly, apply linseed oil using cloth in lieu of brush to produce thin coat. Oil may be thinned with turpentine. Color should develop to ebony in few hours, may then be washed with soap, water. Underside of carbonized birch work: apply one coat of aluminum paint in asphalt vehicle.

10. LINOLEUM:

A) **Linoleum:** 1/8" thick, approved color, satin smooth desk finish, as made by Armstrong Cork Co. or Congoleum Nairn Co.

B) Cement linoleum to steel top plates.

11. HARDWARE FINISH:

A) **Hardware:** heavily plated with nickel chromium producing dull satin finish as approved.

12. REQUIRED SAMPLES:

A) **Metals,** including finish: 6" square.

B) **Glass,** each kind: 12" square.

C) **Soapstone, maple, birch,** including finish: 12" square.

D) **Carbonized birch:** 12" square.

E) **Linoleum:** 6" square.

F) **Hardware:** each kind.

SOAPSTONE CONSTRUCTION

1. FUME HOODS:

A) **Hoods:** soapstone superstructure with stainless steel counterbalanced sash, wire mesh access doors, supported on metal units. Counter: 2" thick, specially selected soapstone suitable for heat work, with drip as specified for soapstone tops, with exposed edges rounded to 1/2" radius. Backs, sides, jambs, lintels, gutters, tops, baffles, balance of soapstone work: 1 1/4" thick. Soapstone: pierced, rebated and the like to receive all mechanical and electrical services. Gutters at lintels: drain to hood ends. Exposed soapstone edges, unless otherwise specified: rounded to 1/4" radius.

B) **Hoods: rigidly assembled** with concealed bolts, dowels, screws; fill joints solidly with litharge and glycerine, point neatly. Reinforcing bolts and screw hole heads: countersunk, plugged with litharge and glycerine. Sash pulleys: approved ball-bearing cast bronze. Sash weights: cast lead, suspended on approved bronze chains. Expose no metal on hood interiors. Fit sash with clear wire glass, set in approved stainless steel frame, equipped with two stainless steel pulls similar to drawer pulls.

C) **On each fume hood: suitable exhaust collar** or connection piece of non-corrosive metal. Provide solid panel hinged type access doors to hood blower enclosures. Doors: hinged to hollow metal frame. Equip doors with knobs, spring catches, as described herein.

2. SINKS:

A) **General.** Sink sides: 1 1/4" thick; flush bottoms: 1 1/2" thick, grooved to receive sides, pitched to drains. Assemble sinks with rebated joints, nuts, bolts, set in litharge and glycerine in watertight manner.

B) **Pharmacy sink:** 1 1/4" and 1 1/2" soapstone, assembled in manner as specified above; consist of two compartments, grooved drainboard, 3" wide dividing partition with 1/4" deep depression and drips for soap recesses. Face of soapstone projected curb: flush with sink backs, pierced for 21 pegs, furnished with 12 birch pegs. Provide soapstone graduate rack as indicated and as specified for similar work. Cabinet unit: 1 1/4" thick soapstone sides, bottom, back, curb; assembled in watertight manner as specified for similar work; contain two 11 gage stainless steel flush grids supported on stainless steel angle cleats. Provide 4 baskets formed of 12 gage stainless steel wire, 1/2" mesh, bound with 6 gage wire frame. Cabinet unit: provide two 1 1/4" thick five ply, laminated birch face veneered flush doors, 1" clearance at top and bottom, finished with 5 coat acid-resisting enamel. Support sinks on legs, bracing, reinforcement as specified herein for similar work. Doors in pharmacy sink: provide 3 1/2" high butts, wrot bronze, chromiumed, secured to soapstone by thru bolts in approved manner.

3. DRAINBOARDS:

A) **Drainboards:** 1 1/4" thick, flush, with pitched grooving.

4. DRAIN TROUGHS AND COVERS:

A) **Drain troughs:** 1 1/4" thick soapstone, rebated joints, bolt and nut construction, set in cement in watertight manner. Trough bottoms: pitch approximately 1" in 5'0" by rebating trough sides at angle to accommodate bottom.

B) **Covers.** Where indicated, provide 16 gage perforated stainless steel **cover plates** with edges underflanged 1 1/4", set in rebates flush with tops; make removable.

5. REAGENT SHELVES, SUPPORTS, MANIFOLDS:

A) **Shelves:** 1 1/4" thick, doweled, cemented to supports. Soapstone shelf supports: 1 1/2" thick, rebated to receive shelves. Supports: make removable without dismantling any part of shelves or table.

B) **Soapstone manifolds:** 1 1/4" and 1 1/2" thick, assembled in units as indicated, make structurally secure in every respect.

6. CURBS:

A) **Wall type curbs and returns:** 1 1/4" thick by indicated heights. Abut curbs in flush manner to plastered or unplastered cinder concrete blocks, tile and units. Where tile or glazed unit walls occur, curbs: have 1/4"

projection from finished wall surfaces. Curbs: in as long lengths as practical, splined as hereafter specified for tops.

B) **Projected type curbs:** 3/4" thick for horizontal members, 1 1/4" thick for vertical members by indicated heights. Joints: doweled, cemented in approved manner, bolted to supports as herein specified. Curbs: in lengths as herein specified. Where such curbs project above finished stool level, enclose backs with similar materials.

7. TABLE AND COUNTER TOPS:

A) **Tops:** 1 1/4" thick, unless otherwise specified. Exposed surfaces, edges: have smooth honed finish; edges: slightly beveled. Joints: flush, tight, reinforced with brass splines set into grooves on either side of joint; made watertight with litharge and glycerine.

B) **Provide drip grooves** 3/16" deep, located 3/4" back from exposed edges. Where curbs abut tops, such joints: secured together in approved manner; make watertight.

8. PEGBOARDS AND PEGS:

A) **Pegboards:** 1 3/8" thick, drilled for 7/16" diameter pegs, spaced 6" on centers, with exposed edges slightly beveled. Drill holes at 45 degree angle.

B) **Pegs:** polished natural birch, 7/16" diameter, project 7" beyond board face, rounded tips. Furnish one peg for every hole.

9. GRADUATE RACKS:

A) **Graduate racks:** 1 1/4" thick, cut to dimensions, profiles, chamfered edges, as indicated. Secure in position in approved manner.

10. SHELVES AND BRACKETS:

A) **Shelves:** 1 1/4" thick by indicated dimensions; keep 1" clear of enclosing partitions; support on brackets as described under "Shelves and Brackets," "Carbonized Birch Construction."

11. BALANCE TABLES:

A) **Balance tables**: 6'0" by 1'9" by 2'7" high, 1 1/4" thick soapstone sub-top, raised beveled edges to prevent glass from shifting; 1/2" thick polished white Carrara glass top, with 1/4" thick felt cushion under entire glass.

12. SUPPORTS:

A) **Where supports for soapstone equipment** such as sinks, table tops, curbs, drain troughs are required other than in cabinet work, construct as follows: Wall angles: 2" by 2" 14 gage steel attached with toggle bolts or expansion shields as conditions require. Brackets: 1 1/2" by 1 1/2" 14 gage steel, welded corners. Legs: 2" by 2" 14 gage formed up posts with cross members of same material. Equip legs with flanges for fastening to floor and soapstone.

B) **Under sinks, tables, and the like,** whether supported by brackets or posts, furnish 4 sided angle iron frame, welded joints. Posts: secured to angle frames with sleeves of 1/8" steel, bolted to angles.

CARBONIZED BIRCH CONSTRUCTION

1. TOPS:

A) **Carbonized birch tops:** 1 5/8" thick, unless otherwise required, built of 3 1/2" wide strips with edge strips 4 1/2" wide, located at top perimeter and at all cutouts therein; glued under 200 pound per square inch pressure with casein glue. Reinforce tops by means of 1/2" tie rods extending entirely thru tops across grain. Locate bolts 3" from each end and sink cutout, space 24" on centers. Bolts: have nuts and heavy leaf spring washers designed to exert pressure at all times and so arranged that, while concealed, nuts will be easily available without removing top or disturbing supporting units. Secure tops to units with provision made for expansion and contraction of tops. Drip grooves and jointing of curbs: as specified for soapstone tops. Exposed edges: slightly rounded.

B) **Maple and birch tops:** 1 1/4" thick, unless otherwise required, built of 3" wide strips, glued up with splines. Where special backs or ends are indicated: coved at their base at intersection of top.

2. DRAINBOARDS:

A) **Drainboards:** have natural finish, 1 5/8" thick, grooved as specified for soapstone drainboards; secured to soapstone sinks in approved watertight manner.

3. SHELVES AND BRACKETS:

A) **Shelves:** as hereinbefore specified for similar work, kept 1" clear of enclosing partitions, in as long lengths as practicable, 1 1/8" thick by indicated dimensions, provided with birch curbs 7/8" thick by 2" high, located at rear of shelves, where required.

B) **Brackets for wood shelves:** 14 gage steel with wall flange 2" wide to properly cover holes drilled in walls for their supports. Where shelves are indicated to stand away from wall: have angle stop properly placed to accomplish desired result; have turned up lip at front to act as stop for shelf. Where three or more shelves occur in height, brackets: welded to 14 gage channel, 2" wide by 1" deep. Mount these channels on wall. 1" depth of channel shall serve as stop for keeping shelf away from wall instead of angle specified above for single brackets.

4. CURBS:

A) **Wall type curbs and returns:** 1 1/8" thick by indicated heights. Curbs: abut walls and partitions as specified for soapstone wall type curbs. Exposed edges: slightly rounded.

B) **Projected type curbs:** 3/4" thick for horizontal members, 1 1/8" thick for vertical members by indicated heights. Joints: assembled in approved manner; curbs: bolted to supports as hereinafter specified. Exposed edges: slightly rounded. Where wall type curbs abut projected type curbs, both: of same total height.

5. GRADUATE RACKS:

A) **Graduate racks:** 1 1/8" thick, cut to dimensions, profiles, chamfered edges as indicated. Secure in position in approved manner.

FURNITURE STEEL CONSTRUCTION

1. WORKMANSHIP:

A) **Construct work in strict accord with contract requirements.** Insofar as possible, fit, construct, fabricate work at shop, ready for delivery, erection at building. Give work that cannot be shop fabricated trial fit and assembly at shop to insure proper, expeditious field assembly.

B) **Construct each unit** as complete integral one; make structurally firm with approved reinforcement to carry without vibration, sway, strain, where required, any superimposed loads and such other apparatus or equipment required to be placed on affected units.

C) **Mechanically interlock joints** with overlapping areas electrically spot welded. Electrically arc-weld right angle joints in addition to proper notching, keying, tight fitting; form rigid mechanical interlocking joint construction.

D) **Where unit depths are indicated** or specified, said depth: from inside surface of metal back to outside face.

E) **Defective work** of any nature will be rejected. Remove rejected work from premises, replace with new.

F) **Overlapping trim.** Where casework overlaps wall finish, equip cabinets with overlapping flange, 2 1/2" wide, formed to 3/8" radius on outside edge contacting wall; inner edge: flanged, form part of cabinet.

G) **Mastic sealing:** where indicated, form retainer for mastic sealing at back of overlapping trim. Retainer: 18 gage steel, formed, flanged to receive mastic. Apply mastic with calking gun after cabinet has been set, anchored; trim mastic flush, smooth.

H) **Plaster key trim:** where indicated, construct with cabinet trim members flanged to form plaster key recess, with return flange perforated for attachment of metal lath or to recess framing. Trim member inner edge: flanged, form part of cabinet opening. Plaster key trim members: 18 gage steel.

2. CASEWORK:

A) **Unit sides, tops, bottoms:** 18 gage steel, reinforced on outer side where required with 16 gage steel box channels. Front edges in each section: offset to take end panels and 16 gage steel 1" wide flat front channel shaped pilasters at intermediate section. Other edges: left straight, electro-welded to back. Back: 20 gage steel, flanged on all sides for attachment to sides, top, bottom, making solid vermin-proof jacket. Front edges of cases covered by doors or containing drawers: rebated all around to form door and drawer strikes. Bases: 16 gage steel straight or recessed for toe space where indicated. Finished tops: 18 gage steel reinforced on underside where required with 18 gage steel box channels welded thereto; form exposed edges into cornice shape. Finished end panels: 16 gage steel reinforced where required with 16 gage steel box channels. Form front edges of end panels into channel with flat faced pilaster; rear and top edges flanged, channeled or left straight as conditions require. Cases recessed into walls: plaster flanges of 16 gage steel formed into angle shape to furnish bond for plaster or tile. Where case work is indicated to overlap wall finishes, instead of intermembering with same, equip cases with overlapping flange 2" wide formed into 3/8" diameter quarter round to fit against wall; flange inner edge to fit and be secured to case rebate at front; continue flange around two sides and top.

B) **Backs.** Where any mechanical devices occur in back of base cabinets, backs of same: made removable from cabinet inside, with oval-head bronze screws.

C) **Coved corners.** Cupboard units (hinged or sliding door cabinets): have all internal corners coved with radius of not less than 3/4" or more than 7/8". Joints: reinforce on back with 16 gage strip leaving smooth flush interior, or made of cove mold formed with offset on each side to take edges of adjoining plates. Joints: acetylene welded, ground smooth.

D) **Bases.** Closed steel bases under cabinets where indicated: 18 gage steel, made integral with case work above.

E) **Slope tops.** Where slope tops on units are indicated: 18 gage steel, sloped to 30 degree angle front to back. Key piece member for tile or plaster: incorporated into slope top at its rear edge.

F) **Counter sub-tops:** counter tops, whether covered with linoleum, wood or soapstone: 16 gage steel with box shaped formation at front edge, turned downward 1 1/2", returned under 5/8". Tops: continuous sheets from front to rear, sectionized in length only at points made necessary for handling, setting. These splice joints: tight fitting butt joints with 14 gage splice plates welded to underside. Tops: reinforced on underside with two stiffeners 1 1/2" by 3/4" high of 14 gage steel, securely welded to steel top underside. Both these angles: continuous entire length of tops. Tops: run continuously over pedestals and knee spaces. No knee space apron, angles or channels other than formation of tops described above, are to be installed in knee spaces or other open spaces in order to retain maximum clearance from top underside to finished floor.

G) **Shelves in cabinets:** 18 gage steel, flanged downward on sides, rear. Front edge: have double fold 1" wide, return against shelf underside at least 5/16". Shelves wider than 30" in width and 18" in depth: have reinforcement thru shelf center formed with double vertical fold and return flange of 1/2" on each side welded to shelf underside.

H) **Brackets.** Shelves in cabinets: have 4 point suspension, adjustable in height on 1/2" centers. Upright adjustment: slots punched in case uprights, have continuous cover channel welded to rear of same, or four 18 gage slotted adjustment strips, welded to inside of cabinet uprights. Strips: open at one side. Shelf suspension: removable clips inserted into case slots or adjustment strips. Clips: have sufficient bearing surface to support shelf when loaded.

(The second and concluding portion of this Specification, including the remainder of the section on "Furniture Steel Construction" and a section on "Stainless Steel Construction," will appear next month.)

MANUFACTURERS' LITERATURE

PROGRESSIVE ARCHITECTURE—330 West 42nd Street, New York 18, N. Y.
I should like a copy of each piece of Manufacturers' Literature listed.

We request students to send their inquiries directly to the manufacturers.

No.	No.	No.	No.
No.	No.	No.	No.
No.	No.	No.	No.
No.	No.	No.	No.

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★ *Editor's Note: Items starred are particularly noteworthy, due to immediate and widespread interest in their contents, to the conciseness and clarity with which information is presented, to announcement of a new, important product, or to some other factor which makes them especially valuable.*

Air and Temperature Control

1-136. *Dunkirk Boilers and Radiators,* 4-p. price list for boilers and radiators; gives prices, ratings for both. Dunkirk Radiator Corp.

1-130. *Refrigerating, Ice-Making and Air Conditioning Equipment (Bul. 80-B),* 32-p. illus. booklet on various refrigeration methods. Principles of refrigeration. Specifications on machinery and systems; data on control equipment, valves, and fittings. Tables on storage temperatures and properties. Frick Co.

★ **1-137.** *Kewanee Type-C Steel Boiler (Bul. 97), AIA 30 CI,* 7-p. illus. booklet on oil-, gas-, or hand-fired coal stoker for large buildings. Characteristics; details and typical installation. Kewanee Boiler Corp.

1-131. *Blowers and Exhausters (Bul. B-5),* Lamson Corp., Allen Billmyre Div. Reviewed October.

1-132. *Marvair, Year Round Comfort,* Muncie Gear Works, Inc. Reviewed October.

★ **1-138.** *Rempe Engineering Data Book,* 34-p. illus. booklet containing information on laying out pipe and fin coils for heating and cooling. Design data, specifications, and tables for various types of coils. Heat transmission coefficient from —60F to +350F. Dimensions. Properties of saturated steam. Specifications. Rempe Co.

1-133. *Rheem, Residential Stoker Furnaces, AIA 30-B-1,* Rheem Manufacturing Co. Reviewed October.

1-135. *South Wind, Sealed Heat (Form 07-490),* Stewart-Warner Corp., South Wind Div. Reviewed October.

Two booklets on gas-fired gravity warm air heating and winter conditioning. General features and principles. Details; suggested specifications. Surface Combustion Corp.:

1-139. *Gravity Warm Air Heating System (Form QGP 46-5-A), AIA 30-B.*

1-140. *Winter Air Conditioning (Form QGP 46-5-B), AIA 30-B.*

1-141. *The Van Packer Chimney,* 5-p. illus. folder on a lightweight, sectional, precast chimney shipped ready to install; can be hung from floor or ceiling, eliminating foundations. Underwriter-approved for all fuels. For 1- and 2-story houses. Van Packer Corp.

★ **1-142.** *Webster System Radiation,* 16-p. illus. booklet on Webster convectors for building in; also exposed models. Descriptions, selection data, suggested specifications, guarantees, capacities, where to buy, on plaster and metal front types, floor and wall-hung models. Warren Webster & Co.

Doors and Windows

4-105. *Ceco Residence Casements, Types, Sizes, and Suggested Details (Bul. 1006),* Ceco Steel Products Corp. Reviewed October.

4-107. *Electronic Serviceman,* 6-p. illus. (3½"x8½") folder on electronic garage door operator controlled from within the automobile. Overhead type now in production. Federal Industries.

4-106. *Preferred Nation-Wide, The Grand Rapids Invisible Sash Balance (Form 47-SB-1), AIA 27-A-1,* Grand Rapids Hardware Co. Reviewed October.

4-108. *"Mecco" Doors,* 8-p. illus. catalog of metal doors of all types—rolling, swing, slide; motor-driven or hand-operated; industrial, commercial; Underwriters' labeled, non-labeled. Types, sizes, descriptions. The Moeschl-Edwards Corrugating Co., Inc.

★ **4-109.** *Truscon Steel Windows and Industrial Doors,* 72-p. illus. booklet on complete selection of doors and windows in modular sizes for various building needs. Tables of types and sizes. Construction features; specifications and installation details. Truscon Steel Co.

Electrical Equipment and Lighting

5-93. *Cold Cathode Fluorescent Lighting,* Fluorescent Lighting Assn. Reviewed October.

5-90. *Color In Lighting,* General Electric Co. Reviewed September.

★ **5-98.** *G. E. Lamp Bulletin (LD-1),* 76-p. illus. booklet by C. E. Weitz of the Nela Park headquarters of General Electric. Complete data on all types of lamps or "bulbs" manufactured, including their history, design, manufacture, use, characteristics, shapes, sizes, dimensions, ratings. Valuable reference to anyone who designs with lighting. (Price 40 cents per copy; make check or money order payable to Lamp Dept., General Electric Co.) Lamp Dept., Engineering Div., General Electric Co.

5-99. *Aluminum for Light Fixtures (Y-723),* 10-p. illus. booklet on adaptability of aluminum in lighting fixtures. Advantages; properties; other applications. Reynolds Metals Co.; and Lamp Dept., General Electric Co.

5-94. *The "General" Idea is Simple,* General Lighting Co. Reviewed October.

5-95. *Portfolio of Planned Lighting Equipment, AIA 31F-23,* The Edwin F. Guth Co. Reviewed October.

★ **5-100.** *Hansen & Waldron, Furniture & Lamps,* loose-leaf catalog illustrating an excellent line of custom-made lamps and furniture for house and office. Sizes; detailed description. Price list included. Hansen & Waldron.

5-101. *Superior Voltage Control (Bul. 547),* 12-p. illus. booklet on Powerstat, a variable transformer, for obtaining continuous adjustable voltage from AC power line; and Stabiline, a voltage regulator, maintaining constant output from fluctuating lines. Types, performance data. Details, ratings. Specifications, price list included. Superior Electric Co.

MANUFACTURERS' LITERATURE

5-97. *Swivelier Lighting Units (Bul. 105-A)*, Swivelier Co., Inc. Reviewed October.

Finishers and Protectors

6-103. *Cut-To-Length Flock*, Behr-Manning Corp. Reviewed October.

6-104. *Camp Floor Resurfacing and Patching Materials*, The Camp Co. Reviewed October.

★ **6-606.** *Floor Finishes, AIA 25G*, 11 data sheets (8½" x 11"), cardboard, tabbed for filing, on floor finishing for most of the common materials and purposes. Condensed data, specifications; estimates on coverage; maintenance information. The Hilyard Co.

6-105. *Aquella and Concrete Masonry Construction*, Prima Products, Inc. Reviewed October.

Insulation (Thermal, Acoustic)

9-75. *Holding Low Temperatures with Better Insulation*, Industrial Mineral Wool Institute. Reviewed October.

9-78. *An Analysis of Residential Fuel Savings Resulting from Insulation*, 16-p. booklet; simplified analysis of savings due to various thicknesses of insulation. Well documented claims. Insulite Div., Minnesota & Ontario Paper Co.

9-76. *Johns-Manville Built-Up Roofs (Bul. 51A)*, Johns-Manville. Reviewed October.

9-77. *Para-Plastic*, Servicized Products Corp. Reviewed October.

★ **9-79.** *The Contribution of Vermiculite to Fire Protective Construction*, summary, compiled by the Vermiculite Research Institute, of recent tests on vermiculite plaster used for fireproofing on steel framing. Ratings substantially increased. Universal Zonolite Insulation Co.

9-80. *Zonolite Insulating Concrete Floors, AIA 37A*, 4-p. illus. folder on a type of concrete floor designed to eliminate cold and dampness. Details, recommendations, specifications. Universal Zonolite Insulation Co.

9-81. *Beauty and Quiet*, 28-p. illus. booklet on Acoustone "F" and Motif'd Acoustone, two types of mineral acoustic tile. Properties, installation data, details. U. S. Gypsum Co.

Load-Bearing Structural Materials

12-132. *Besser Modular Standard Building Units, AIA 10-C*, 24-p. illus. booklet on modular concrete building block, brick, and tile. Advantages, types, sizes, applications. Modular sizes listed. (Price $2.00 per copy; make check or money order payable to Besser Mfg. Co.) Besser Mfg. Co.

12-133. *Inco Welding Materials (186C)*, 16-p. illus. booklet on welding electrodes, wires, fluxes, and their uses. Table of metals and welding media. Detailed description. International Nickel Co., Inc.

12-134. *Nickel Alloyed Cast Irons; Engineering Properties and Applications of Ni-Resist*, 35-p. illus. booklet on physical and mechanical properties of cast nickel alloy. Tables show performance under 400 different conditions. International Nickel Co., Inc.

12-135. *McKeown Church Trusses, AIA-19-B 3*, 4-p. folder on factory-built church trusses. Illustrates various types. Also termite- and flame-proof wood preservatives. McKeown Bros.

12-136. *Pittsburgh Steeltex*, 18-p. illus. booklet on 2 kinds of reinforcing products: Steeltex, steel wire mesh with fibrous backing for use with masonry veneer, concrete, and gypsum; welded wire reinforcement for use with concrete construction. Detailed description. Applications, dimensions, areas, and weight tables. Pittsburgh Steel Products Co.

12-137. *Modern Homes by Modern Methods*, 24-p. (6" x 9") illus. booklet on prefabricated houses. Construction and erection; advantages. List of distributors. Prefabricated Home Manufacturers' Institute.

12-130. *Rilco Dwellings*, Rilco Laminated Products, Inc. Reviewed October.

12-131. *How to Raise Rilco Rafters*, Rilco Laminated Products, Inc. Reviewed October.

Materials of Installation

13-62. *Builder's Guide: Chromedge Metal Trims (X-151)*, 18-p. illus. booklet on line of metal trims for wallboard materials. Description. Decorative uses. Dimension chart. Sink-frames; measurement and ordering data. B & T Metals Co.

13-60. *Installing Teco Timber Connectors in Light and Heavy Timber Structures, AIA 19-B*, Timber Engineering Co. Reviewed October.

13-61. *U. S. Aluminum Building Wire Handbook (Form M-7876)*, U. S. Rubber Co. Reviewed October.

Non-Load-Bearing Structural Materials

14-44. *Magnesium (Form DM 102-50M-746)*, The Dow Chemical Co. Reviewed October.

3 booklets on *Johns-Manville System of Unit Construction (Form BM 312A)*, Johns-Manville. Reviewed October:

14-45. *Wall Units.*

14-46. *Ceiling Units.*

14-47. *Floor Units.*

12-129. *Ideas for Commercial Application, Insulux Glass Blocks*, Owens-Illinois Glass Co., Insulux Products, Inc. Reviewed October.

14-49. *How Architectural Porcelain Enamel Produces Profits, AIA 15-H-2*, 16-p. booklet illustrating and discussing various uses of porcelain enamel. Advantages. Use of color. Porcelain Enamel Institute, Inc.

14-48. *Lumitrim, Aluminum Castings with Color*, Southwestern Mfg. & Supply Co. Reviewed October.

Sanitary Equipment, Water Supply, and Drainage

19-165. *Bradley Group Washing Equipment (Cat. 4701), AIA 29-H*, Bradley Washfountain Co. Reviewed October.

★ **19-169.** *Duriron (Bul. 703), AIA 29b-81*, 12-p. illus. booklet on corrosion-resistant sanitary sinks, sink strainers, traps, floor drains, pipe, and fittings for industrial and institutional use. Physical characteristics and properties. Installation details. Comparative acid and impact test results. Applications; also price list and data bulletin. Duriron Co., Inc.

★ **19-170.** *Thor Automatic Sink (Form 47-39)*, 4-p. illus. leaflet on new 2-compartment sink into one compartment of which may be inserted a clotheswasher (and dryer) or dishwasher unit. Change requires 1½ minutes, may be made by the housewife. Description, roughing details, photos. Electric Household Utilities Corp.

19-171. *Plibrico Portable Incinerator*, 4-p. illus. brochure on a "packaged" incinerator for use in institutions, industrial plants, hotels, stores, etc. Details, construction. Table of sizes. Plibrico Jointless Firebrick Co.

19-166. *Laundromat-Equipped Planned Laundries for Apartment Houses (7AW M 5901)*, Westinghouse Electric Corp., Appliance Div. Reviewed October.

19-167. *Yeomans Expelsor (5M-1-47-ERW)*, Yeomans Bros. Co. Reviewed October.

19-168. *Service Catalog (47-1)*, J. A. Zurn Mfg. Co. Reviewed October.

19-172. *Hudee Ideal Sink Frame System*, 4-p. illus. folder on a self-sealing sink frame. Advantages. Installation data. Standard sizes. Walter E. Selck & Co.

Specialized Equipment

19-164. *Pentrate For Making Wetter Water (AD 9010)*, 4-p. illus. folder on "Pentrate" which, when added to water, greatly speeds up the penetrating and spreading qualities. Application as a fire fighter. Test reports. American-La France-Foamite Corp.

19-169. *American Safety Standards (PM 87)*, American Standards Assn. Reviewed October.

19-171. *Permanent Magnets (3-47)*, General Electric, Chemical Dept., Metallurgy Div. Reviewed October.

5-100. *Hansen & Waldron, Furniture & Lamps*, Hansen & Waldron. (See No. 5-100 under "Electrical Equipment and Lighting.")

★ **19-165.** *Mitchell Models*, 4-p. illus. booklet on architectural scale models for industrial buildings, commercial projects, city planning, and residences. Examples, ordering data. Mitchell Models.

Surfacing Materials

19-174. *Industrial Floors by Armstrong*, Armstrong Cork Co. Reviewed October.

9-79. *The Contribution of Vermiculite to Fire Protective Construction*, Universal Zonolite Insulation Co. (See No. 9-79 under "Insulation.")

19-177. *Decorative Micarta*, 4-p. illus. folder on a laminated plastic material. Advantages. Installation data. Colors, grades, sizes. Decorative uses. U. S. Plywood Corp.

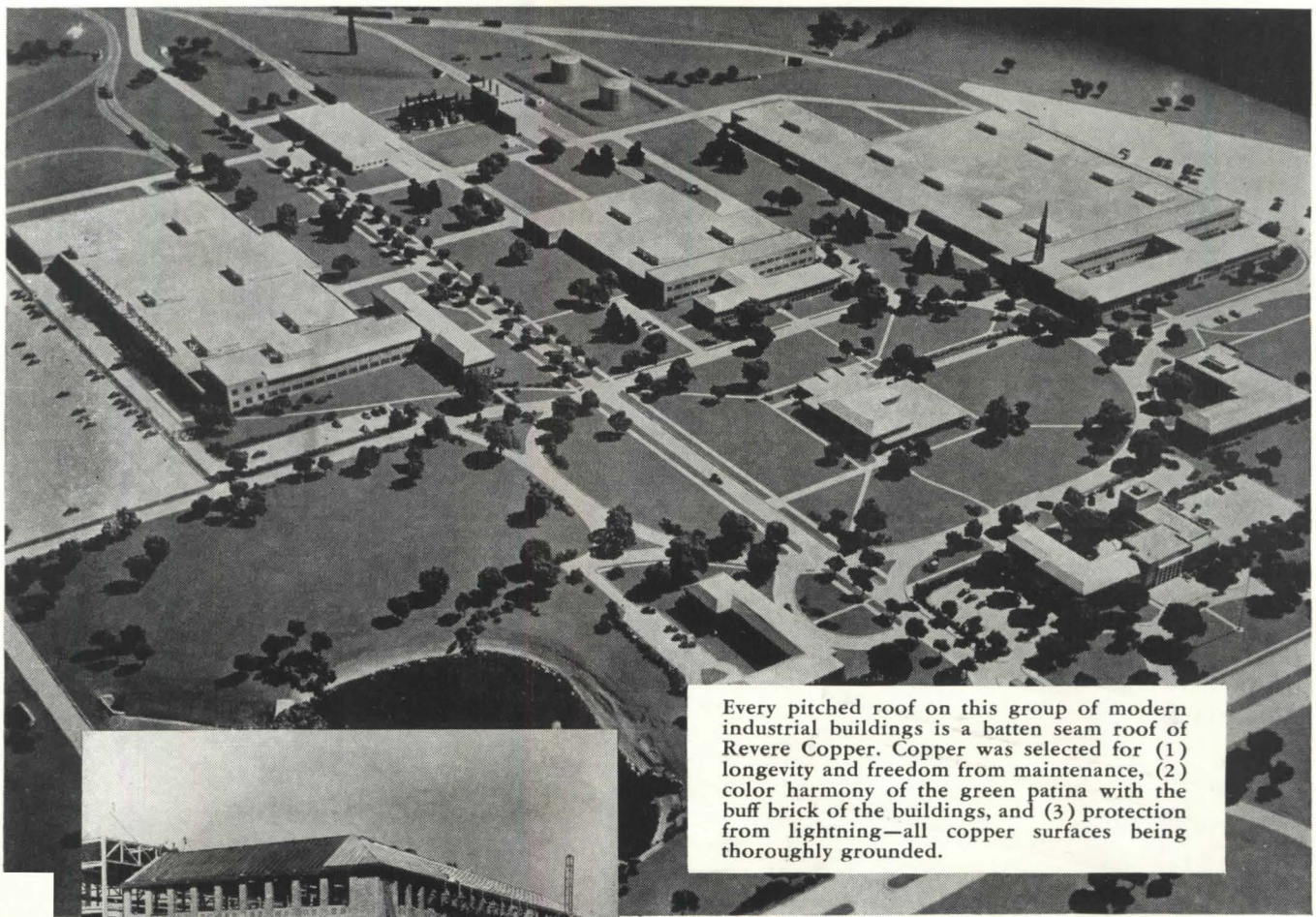
19-175. *Johns-Manville Corrugated Asbestos Transite (TR 45A)*, 18-p. illus. booklet on uses of asbestos for building construction, fabrication of ducts, louvers, etc. Properties and application. Decorative possibilities. Johns-Manville.

19-176. *Ma-Ti-Co Asphalt Flooring Tile*, 4-p. illus. folder on grease-resistant floor tiling for use where oil and grease are a problem. Standard colors. Specifications. Mastic Tile Corp. of America.

Traffic Equipment

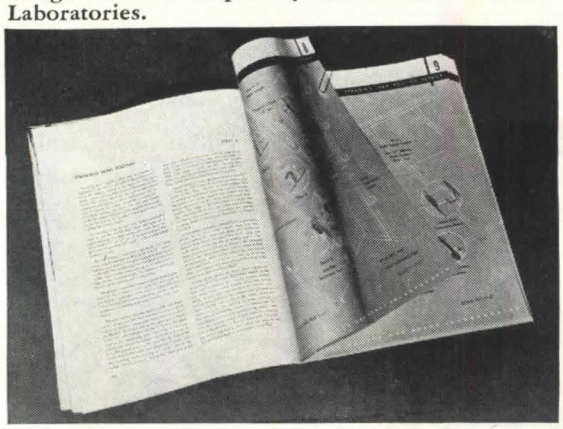
20-43. *Murphy Electroil Elevators*, The Murphy Elevator Co., Inc. Reviewed October.

REVERE COPPER SELECTED
For Roofs of Modern Industrial Buildings



Every pitched roof on this group of modern industrial buildings is a batten seam roof of Revere Copper. Copper was selected for (1) longevity and freedom from maintenance, (2) color harmony of the green patina with the buff brick of the buildings, and (3) protection from lightning—all copper surfaces being thoroughly grounded.

To assure the finest sheet copper construction, the architects and engineers took full advantage of new design data developed by the Revere Research Laboratories.



This same information is available to all users of copper in the Revere manual* of sheet copper construction and through the Revere Technical Advisory Service.

COPPER and COMMON SENSE

*Revere's manual of sheet copper construction, "Research Solves Problems of Stress Failures in Sheet Copper Construction," contains 96 pages of important new facts which enable you to design or install copper roofs, gutter linings and flashings that give *extra* years of service. It has been widely distributed to architects and sheet metal contractors and should be in your office files. In all matters of sheet copper construction, it will pay to turn to this manual first.

Revere materials are available from leading distributors throughout the United States. A Revere Technical Advisor, Architectural, will always be glad to consult with you without obligation.

REVERE

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Alcoa Aluminum INDUSTRIAL

Aluminum, a topflight roofing material that has been used on monumental buildings for many years, is now economical for industrial applications. Alcoa Industrial Roofing and Siding is made of a tough Alcoa Alloy that is unexcelled in resistance to atmospheric corrosion by any aluminum alloy now made. It is easy and inexpensive to put on . . . attractive in appearance.

Alcoa Industrial Roofing and Siding gives you, and your clients, that almost unbelievable combination . . . a *better* material at *lower* price. A material that will withstand common industrial atmospheres . . . smoke and fume . . . for years on end. A material that won't rust, streak or stain.

Figure it in aluminum, any job on your boards that can use sheet roofing or siding. Calculate not only the savings but also the client satisfaction, which will be plenty.

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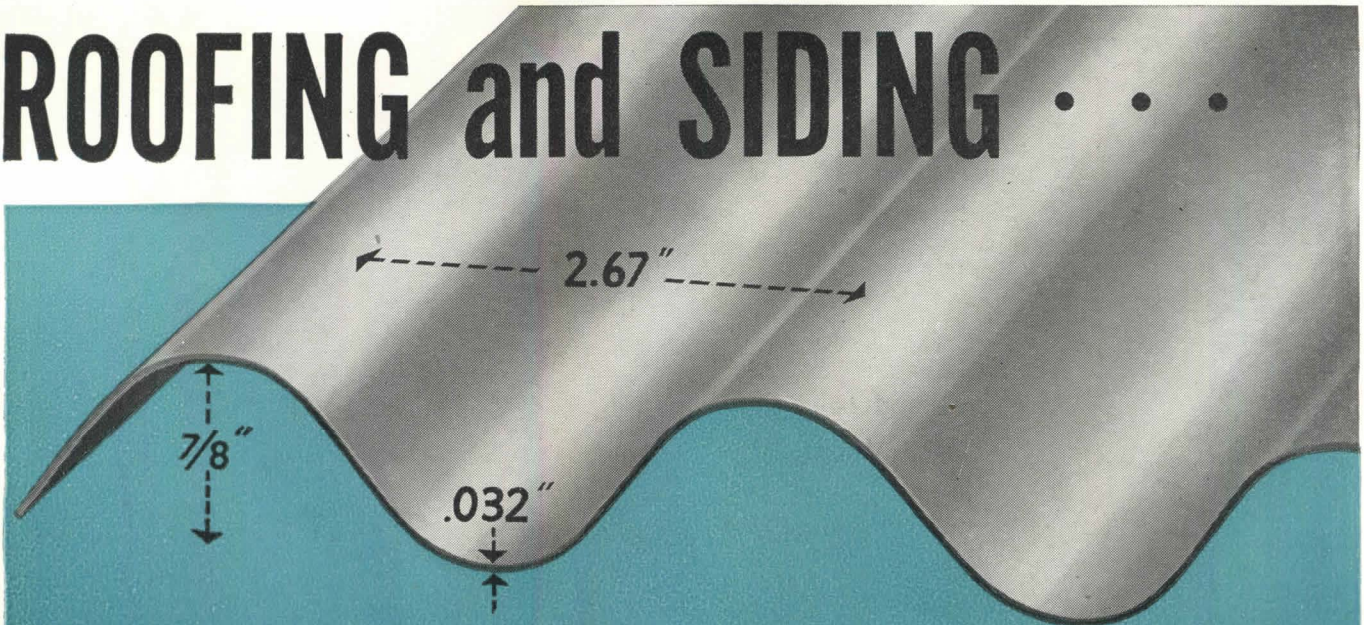
ALCOA

ROOFING and SIDING . . .



HERE ARE THE DETAILS

Thickness: .032 inches.

Lengths: 5, 6, 7, 8, 9, 10, 11 and 12 feet.

Widths: Roofing sheet, 35 inches; Siding sheet, 33¾ inches; Coverage: 32 inches.

Corrugation: ⅞ inch deep. 2.67 inches crown to crown.

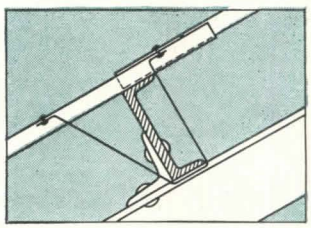
Weight: 56 lbs. per 100 sq. ft.

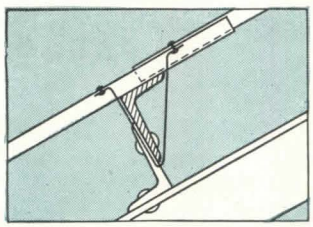
LOAD CARRYING CAPACITY

PURLIN SPACING	CLEAR SPAN	UNIFORM LOAD p. s. f. (Safety factor: 2)
6′6″	76″	29
6′0″	70″	35
5′6″	64″	41
5′0″	58″	50
4′6″	52″	63
4′0″	46″	80

QUICK APPLICATION

Illustrated here are two of the many ways of installing Alcoa Industrial Roofing Sheet.



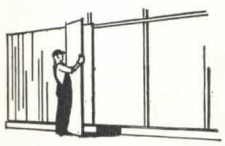


STRAP FASTENERS CAN BE ADAPTED TO PRACTICALLY ANY TYPE OR ARRANGEMENT OF PURLINS.

WITHSTANDS INDUSTRIAL SMOKE AND FUME

Alcoa Aluminum has been used for many years on coal mines, railroad terminals, warehouses, factory buildings and locomotive roundhouses. The protective qualities of Alcoa Roofing and Siding have been virtually unaffected by these severe conditions.

FOR SIDING THAT GOES UP FAST



Alcoa Industrial Siding has the same corrugation dimensions and lengths as Industrial Roofing. Over-all width is 33¾ inches covering 32 inches and providing extra economy for siding applications. Properly applied and with girt spacings up to 7′9″ it will withstand 20 p.s.f. wind load.

ASK FOR COMPLETE INFORMATION

Pick up your telephone now and call your local Alcoa sales office. Ask for a sample and complete information on Alcoa Industrial Roofing and Siding Sheet. Or write to ALUMINUM COMPANY OF AMERICA, 1452 Gulf Bldg., Pittsburgh 19, Pa.

INDUSTRIAL ROOFING AND SIDING

THE fabric-plastic-lacquer covering

fabron

REG. U. S. PAT. OFF

for walls and ceilings
of hospitals

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York & Sawyer, Architects

An Added Advantage:

FABRON INCREASES FIRE SAFETY

Because part of the standard equipment of an institutional building is combustible and conducive to the rapid spread of a conflagration, the building, even if it be of fireproof construction, cannot be considered fire safe.

To minimize a potential danger, fire authorities recommend, among other things, the use of materials that are non-combustible or that prevent the spread of fire and thereby help to confine flames to the area in which they originate.

FABRON — although primarily a decorative wall treatment — considerably **increases fire safety** in any building. The Underwriters' Laboratories, Inc., in its report on the results of recent tests, state that, when applied to plaster walls and ceilings, FABRON **prevents fire spread**— that when exposed to fire, it does **not materially** contribute smoke or fumes, either or both of which are often responsible for many casualties or cause panic and personal injury during a conflagration—that FABRON offers **maximum** fire safety when applied directly to **bare** plaster.*

FABRON is the ONLY decorative wall treatment tested and listed by the Underwriters' Laboratories, Inc., carrying their label of approval on each roll. It combines structural and practical advantages with durability and economy—due to its washability, its wall protective features and its easy maintenance. FABRON represents a fundamental departure from traditional methods of treating walls.

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**"Increased flame spread can be anticipated if Fabron is applied to paint coatings in excess of 0.01 inches thickness" - Underwriters' Laboratories, Inc.*

FREDERIC BLANK & CO., INC. Established 1913 230 PARK AVENUE, NEW YORK 17, N. Y.

Further information upon request. See our catalog in Sweet's 1947.

TRUMBULL ELECTRIC

CONTROLITE

the equipment that makes LIGHTING *a part of the Show*

The next time you settle down in your seat to enjoy a swell show, spare a few seconds of professional thought to the stage lighting installation. You may or may not realize how much of an engineering job it is to achieve that smooth interlocking of house and stage lighting and the perfection of color harmony and intensity in "painting with light" as the play goes on. Some of the finest switchboard and control jobs in the country are in our big theatres . . . and a great many of them bear the Trumbull Electric Controlite nameplate . . . typical of the advanced precision electrical engineering that characterizes all Trumbull Electric products.

THE TRUMBULL ELECTRIC MANUFACTURING CO., PLAINVILLE, CONNECTICUT

OTHER FACTORIES AT NORWOOD, OHIO, SEATTLE, SAN FRANCISCO, NORTH HOLLYWOOD

CONTROLITE Stage Lighting Control Boards are, like all Trumbull Electric Products, sold through Electrical Wholesalers and installed by Electrical Contractors. Trumbull Engineering services contribute a wealth of specialized experience in this highly technical field.

FROM THE TECHNICAL PRESS

JOHN RANNELLS

MODULAR COORDINATION

How Shall Modular Coordination be Presented to the Architect? Grid Lines, *August 1947.* **An A62 Data Service; What is Module?** Grid Lines, *September 1947. Modular Service Assn., 110 Arlington St., Boston, Mass.*

The Modular Service Association is really getting down to business and is now seeking to put its objectives into practice in the broadest possible way. Their proposed data service promises to demonstrate fully to architects and builders the great advantages of modular products and modular coordination. The sheets will be 8½" x 11", loose-leaf, systematically indexed. They will present standard details in the most usable form.

The Association should especially be commended for its realization that "some confusion may arise from the inexactness of our own terminology. Probably the A62 method is better described as Dimensional Coordination." They are evidently awakening to the fact that century-old modular planning is firmly rooted in architectural thinking, while "modular" (or "dimensional") coordination has yet to make its way into general practice.

Modular Facing Tile Handbook. *Facing Tile Institute & Structural Clay Products Institute, 1756 K St., N. W., Washington 6, D. C. 90 pp., 8½" x 11", spiral binder. Free to architects, draftsmen, builders, etc.*

"This catalog supersedes all catalogs heretofore published by the Facing Tile Institute." With only slight changes in the old dimensions, the entire range of facing tile and structural tile sizes is brought into the system of modular coordination. All of the various shapes are illustrated, as well as combinations for building up double-glazed partitions.

The new material in this catalog (more than half of its bulk) consists of layout diagrams, plans, and elevations. These are very well presented—better, in fact, than in the *A62 Guide* itself. The printing job (by photo offset) is beautifully done. The entire book is so well made that it is a pleasure to work with.

Besser Modular Standard Building Units. *Besser Manufacturing Co., Alpena, Mich. 24 pp., 8½" x 11". $2.00*

This rather awkward pamphlet is notable chiefly for presenting modular sizes in concrete block by the prime manufacturer of concrete block machinery.

The center spread shows 50 standard block and other pages show many more. This is not the way to economy, which requires close adherence to a few basic shapes.

Truscon Steel Windows and Industrial Doors. *Truscon Steel Co., 1315 Albert St., Youngstown, Ohio. 72 pp., 8½" x 11".*

A more complete presentation than former catalogs, of the entire Truscon line. Sizes (like those of other metal window manufacturers) are modular—varying by 4" or 8" increments and with over-all window dimensions such as to detail properly with masonry laid up on the 4" grid. Many well drawn installation details are given, with grid dimensions overprinted in orange.

HANDBOOKS, MANUALS, PAMPHLETS

An Evaluation of Methods and Fixtures Used for Bathroom Mirror Lighting. *Myrtle Fahsbender and Beryle Priest. Paper presented at National Technical Congress of the Illuminating Engineering Society, New Orleans, La., Sept. 1947. To be published in* Illuminating Engineering.

A study of several presently available lighting units and their placement at the bathroom mirror to obtain illumination data which would be representative of nearly all lighting methods for this purpose. Two side brackets, set somewhat lower than the customary height (5'-1" or 5'-2" instead of 5'-6") appear most satisfactory. A ceiling fixture for general illumination should be used regardless.

Certigrade Handbook of Red Cedar Shingles. *Bror L. Grondal and W. W. Woodbridge. Red Cedar Shingle Bureau, 5508 White Bldg., Seattle, Washington, 1942. 100 pp., 5" x 8". 50 cents*

All there is to know about red cedar shingles and how to use them. Many interesting facts about the material and its properties in use enliven the text; for example, its durability is not due so much to structure as to the presence of certain phenols which are highly toxic to wood-attacking fungi. However, like so much advertising literature, the writing is diffuse and repetitive; specific information would be hard to find if it weren't for a good index.

Fundamentals of Land Design. *Small Homes Council, University of Illinois* Bulletin, *Urbana, Ill. 8 pp., illus.*

Another lively pamphlet giving the homeowner good advice on landscaping and site planning. Could be read to advantage by architects for it covers all the factors related to outdoors that should be taken into account (and frequently aren't) in designing small houses.

Individual Sewage Disposal Systems. *Recommendations of Joint Committee on Rural Sanitation. Reprint No. 2461, U. S. Public Health Service, Washington, D. C. 33 pp., 6" x 9". Available free at USPHS District Offices.*

Complete and concise information on sewage disposal from houses, rural public buildings, camps, schools, etc.

Planning the X-Ray Processing Facilities and Equipment. *Eastman Kodak Co., 343 State St., Rochester 4, N. Y. 8½" x 11", illus. Free to hospital architects.*

A very thorough report on planning, services, equipment, etc., of the darkroom end of the X-ray department by Eastman's Medical Service Division.

Printed on one side of the paper in double-spaced typing, reproduced full size, the three pamphlets are bulky (and impressive). Eastman has here made available to the architect precisely the background material he needs to work intelligently on any problem involving X-ray processing. Would that more manufacturers would be so effectively helpful!

BOOKS

APPLIED ARCHITECTURAL ACOUSTICS

Michael Rettinger. Chemical Publishing Co., 26 Court St., Brooklyn, N. Y., 1947. 189 pp., illus. $5.50

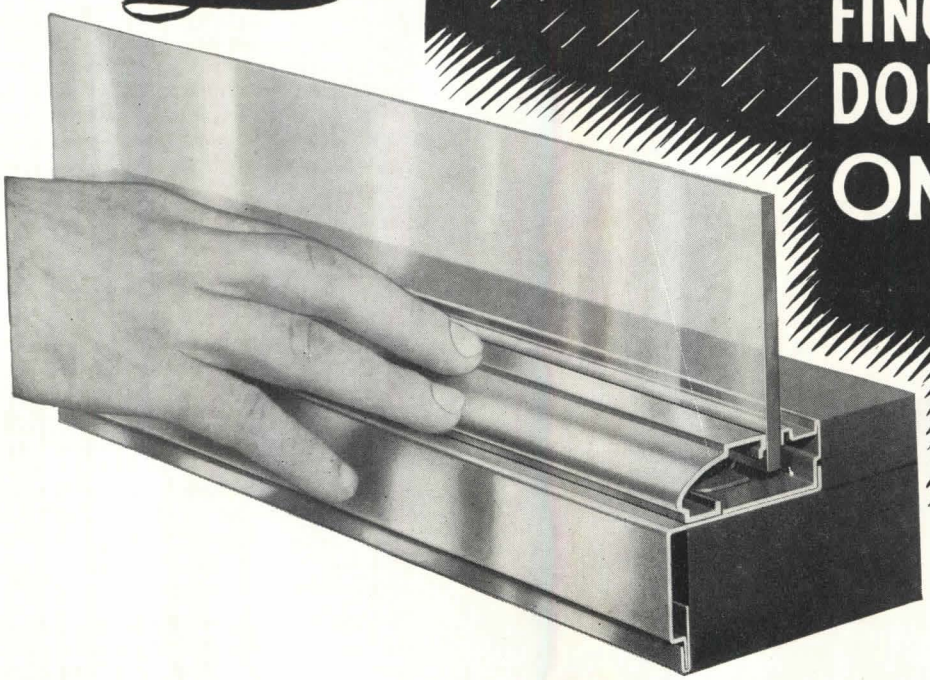
It has been freely predicted that acoustics would fill as large a place in the public consciousness during the next ten years as did various methods of circulating and cooling air, loosely called air conditioning, in the decade prior to the war. A considerable body of literature may be expected to accompany such a rise in public interest. It has already become apparent in periodicals. *Applied Architectural Acoustics* may well be a forerunner of a shelf of books on the subject.

Applied Architectural Acoustics sets forth first the terminology and basic physical principles of acoustics. There follow sections on geometric acoustics, reverberation, architectural acoustics (principal factors affecting hearing conditions), sound insulation, and acoustic materials. Specific employment of the phenomena and application of the techniques treated up to this point are

(Continued on page 108)

Look- NO SCREWS

FINGER-TIP SETTING DOES IT . . *and* ONLY BRASCO HAS IT



OPERATING on a simple principle uniquely applied to the safe installation of show window glass, Finger-tip Setting marks a notable advance in glass safety. In conjunction with Brasco's deeper grip, the glass is held firmly and uniformly, without pressure, without springs and without set screws.

FINGER-TIP CONTROL (patent applied for) is only one of the features of our new Safety-Set Store Front Construction. Others include five new sash members, with one rolled in heavier gauge than previously obtainable . . sash height lowered to 25/32″ exposing largest possible glass expanse . . heavier bars for heightened areas . . stronger steel reinforcements . . heavier gauges in all sections.

Distinguished fronts with greatest visibility can now be built entirely with standard members in stainless steel or anodized aluminum, using stock millwork only. Thus Brasco Safety-Set Store Fronts provide economies in both material and labor, in addition to handsome, soundly engineered construction for stores of tomorrow.

★ A COMPLETE LINE FOR EVERY DESIGN ★

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BRASCO MANUFACTURING CO.

HARVEY · (Chicago Suburb) · ILLINOIS

National Distribution Assures Effective Installation

REVIEWS

(Continued from page 106)

then described with respect to motion picture theaters, scoring stages, reverberation chambers, vocal rooms, sound stages, broadcasting studios, television studios, hospitals, churches, and auditoria. There is a section on acoustic measurements and numerous absorptivity tables for building materials variously mounted.

The body of material presented by Mr. Rettinger in the small compass of this volume is considerable. The work is especially notable in the degree of particularization with respect to the nature of various types of sound absorbent materials and the manner of their employment. This material, the distillation of much experience in acoustic planning, is as authoritative as it is detailed. Along with the citing of the considerations which enter into the acoustic planning of the types of buildings listed are mathematical derivations of the principles employed. Graphs are used profusely to illustrate relationships between variables and to set forth optimal shapes and dimensions. It is probable that Mr. Rettinger has assembled more up-to-the-minute, practical information, useful to the builder, than is to be found elsewhere in such small compass.

Despite the virtues listed, *Applied Architectural Acoustics* falls short in several respects of the promise of the introduction. The book is directed to "architects, engineers, contractors, and all those connected with the planning and the construction of buildings in which acoustics has been given preference." The mathematical derivations and demonstrations which constitute a significant portion of the work will have little value for any of those people except a few engineers with special training or experience in acoustics, and may frighten off some who should use the book.

The reader will in many cases need a step-by-step outline of procedure for the acoustic design of the structures cited. The considerations which govern acoustic planning are adduced, but the planner is given little guidance in the order in which he can best undertake the various phases of his problem, the relative importance he must give to discrete portions thereof, and the place or extent of tolerable compromise. Comparatives left hanging in the air, i.e., "larger," "smaller," "too much," "too little," with no reference point or tolerance limits, may baffle the builder who needs to know how much.

This reviewer misses particularly reference to or provision for the changes to be anticipated in technical equipment for the reproduction of sound and the manner of its use in the arts. The introduction of binaural or stereophonic recording will bring about considerable revision in all of the technical processes and practices involved in the making of the sound motion picture. Current changes in recording practice which involve no new equipment may make new demands upon sound stages, scoring stages, or motion picture theaters. The separate control of acoustic conditions on the stage and in the audience area has been demonstrated as desirable in concert and opera. The control of sound becomes more flexible and artistically potent day to day and carries with it changing demands upon structures. Any building that is worth building will outlast most of the current techniques for the presentation of sound, except the traditional mechanical system.

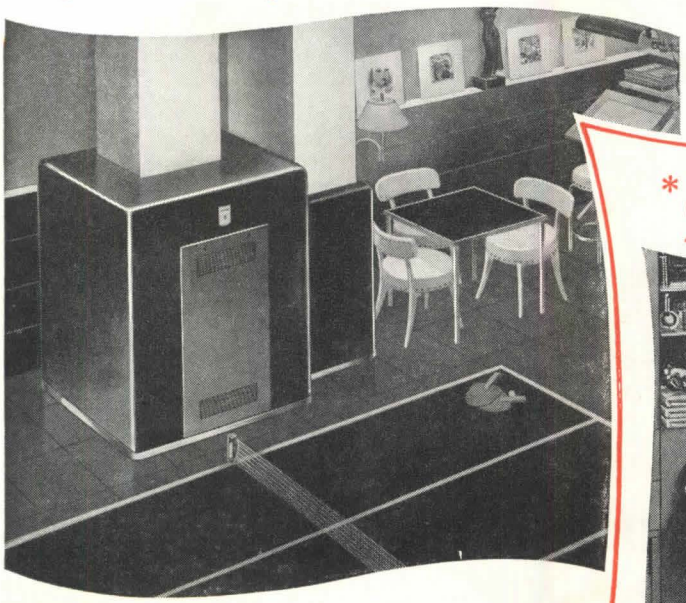
It is to be hoped that when Dr. Knudsen brings out a sequel to his monumental *Architectural Acoustics*, he will take care of some of these problems. In the meantime, Mr. Rettinger's book is up to date on current problems.

HAROLD BURRIS-MEYER

(Continued on page 110)

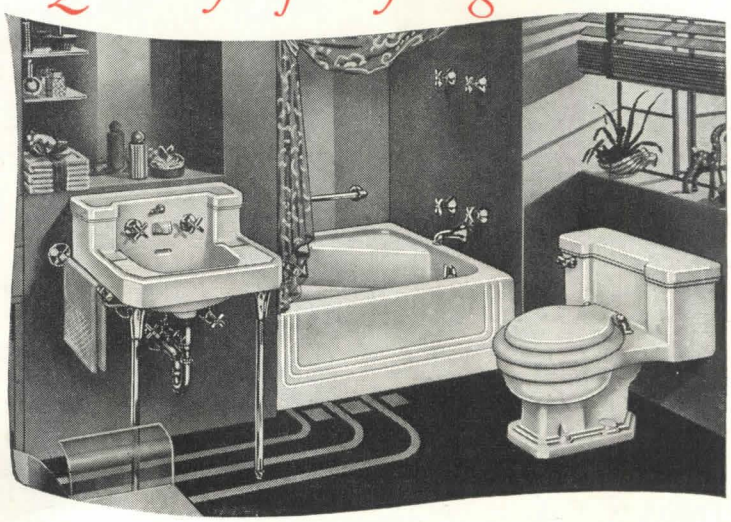
Choose AMERICAN-Standard for *Quality that's sure to please!

*Quality of Construction



Beneath the smart jacket of the **WESTMORELAND** Oil Fired Winter Air Conditioner in this attractive basement recreation room is one of the sturdiest, most superbly engineered heating units money can buy! Available as a completely coordinated unit with American-Standard's own Arcoflame Burner, or for use with any other good burner. Made in sizes ranging from 105,000 to 330,000 Btu., the **WESTMORELAND** is ideal for homes of practically any size.

*Quality of Styling



Center of interest in this bright, compact room is the beautiful **NEO-ANGLE** Bath, which though only about four feet square, provides roomier bathing space, greater comfort, convenience and safety than most baths. The harmonizing **COMPANION** Lavatory and **MASTER ONE-PIECE** Water Closet are of genuine vitreous china. All three fixtures available in white, and many attractive colors.

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REVIEWS

(Continued from page 108)

LUMBER

Nelson C. Brown. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N. Y., 1947. 340 pp., illus. $4.25

A textbook on the manufacture, conditioning, grading, distribution, and use of lumber in this country with special emphasis on sawmill operation. The history of the lumber industry is traced, beginning with its center in Maine where it flourished for 200 years before 1850. Then its center shifted to New York, then Pennsylvania (1860), then the Lake States (1870-95); then Southern pine with its peak in 1909 (but still going strong), and the northwestern softwoods which still dominate the industry.

The best lumber is nearest the bark, so the sawyer turns the log frequently, "following the grade around the log," to get the most value out of it. Except in small mills the main saw (head saw) is used chiefly to break down the log into pieces which can be further reduced to finished sizes by the more accurate edgers, gang saws, etc.

Finishing all lumber four sides, now the general practice, and kiln drying, are done mainly to save shipping costs —in the South, commonly in concentration yards which handle the rough lumber from several small mills, thus achieving standard products as readily as in the huge mechanized western mills.

The book is particularly rich in figures on various phases of lumbering: sizes, percentages of waste due to various causes, variations in pratices in hardwood and softwood industries, distribution of costs, etc.

Small mills are on the increase. This book gives so thorough a treatment of the subject that anyone concerned with forest products on a local scale could learn a great deal from it.

J. R.

PORTRAITS OF WESTERN AMERICA

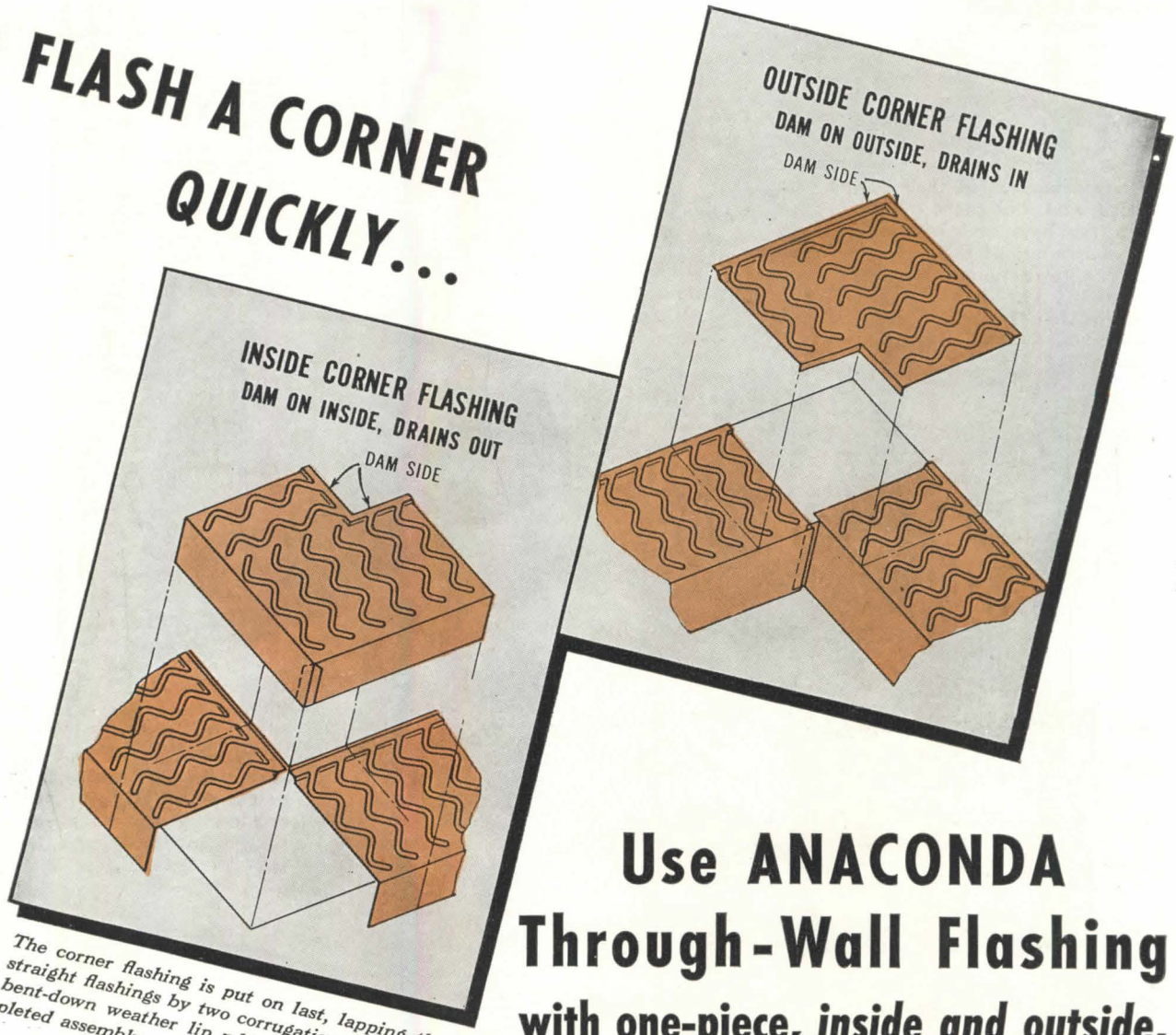
Three recent books from one publishing house provide an interesting close-up view of the face of America as it appears in the West. No one of these books lays any emphasis on architecture, though the architecturally alert will find considerably more to read in the books than the merely travel-minded. For, any book picturing a place or a region inevitably contains numerous photographs of buildings; just as inevitably, the buildings reveal the ambitions, desperations, pretensions, or sincerities of the individuals or groups who sponsored them.

Ghost Towns of Colorado. *Compiled by Workers of the Writers' Program of the Work Projects Administration in the State of Colorado. American Guide Series. Hastings House, 67 W. 44th St., New York 18, N. Y., 1947. 116 pp., illus. $2.75*

The trials of the early, money-hungry prospectors; the rocketing fortunes, first from gold, then silver, then gold again, that came out of the valleys, creeks, and pastures of Colorado; the exploits and extravagances of the Bonanza and Carbonate Kings; the frenzied growth of towns in the wake of new discoveries, and the collapse and frustration of many of these, are told in a lively, running narrative. Photographs and a revealing selection of old drawings show the environment in which this bold life erupted. With few exceptions (Central City is the most notable) the towns had a lean and hungry look,

(Continued on page 112)

) FLASH A CORNER QUICKLY...



The corner flashing is put on last, lapping the straight flashings by two corrugations. Note the bent-down weather lip which makes the completed assembly water-tight.

Use ANACONDA Through-Wall Flashing with one-piece, *inside and outside,* corner flashings

ANACONDA THROUGH-WALL FLASHING is designed to provide positive drainage, a strong mortar bond and long-lived protection . . . and also to make the sheet metal contractor's work as easy as possible.

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REVIEWS

(Continued from page 110)

quite apart from the fact that so many of them are today simply the decaying remains of once booming communities. One suspects that in their towns, the builders and designers (if any) reflected the lean and hungry light in the eye of many of the citizenry of the day. The town names have the same rude quality: Leadville, Cripple Creek, Buckskin Joe, Delaware Flats, Telluride, Ouray, Silverton, Placerville, Chicago Creek, Russell Gulch, etc.

Salt Lake City. *A Pictorial Study by Joseph Muench. Hastings House, 67 W. 44th St., New York 18, N. Y., 1947. 58 pp., illus. $1.50*

A city that grew out of a desert, a city newly founded by a group of people seeking freedom from religious persecution, appears architecturally to be about what you might expect. There are noble things about it that reflect the determination and faith of the pioneers—132-foot-wide streets, splendid vistas. Then, typical of any new, fast-growing U. S. community, there is the crazy-quilt pattern of every architectural style known to man from General Grant Gothic to the columns and dome of the State Capitol's Federal architecture, to a church "reminiscent of a New England Meeting House."

Most difficult of all to assay architecturally is the strange flowering that occurred under the auspices of the Church of Jesus Christ of Latter-day Saints. In the main Temple in Salt Lake City itself, as well as in three other Temples shown in the book, one sees a firm resolve to create something new as a proper house for the faith. Yet, in spite of a certain sureness and confidence in the design, the many-tiered side walls, the odd (no doubt symbolic) detailing, and the ordering of the spires strike this reviewer as rather ponderous overtones echoing architectural cultures of other places and times—sometimes vaguely Saracenic, sometimes Dresden Baroque or Medieval Spanish. From the designer's point of view, then, Salt Lake City appears to be a handsome modern city with wide boulevards, set on a broad plain at the foot of the Wasatch Mountains, just above the great inland sea; a proud city and an amazing one, considering its desert origin. Beyond that, it has the typical American architectural gumbo flavor, with unique Mormon seasoning.

West Coast Portrait. *Edited by Joyce R. Muench. Hastings House, 67 W. 44th St., New York 18, N. Y., 1946. 168 pp., illus. $5.00*

Here, 250 illustrations in photography, lithography, wood engraving, and etching, present a panoramic impression of the glories of the West Coast. This rich material is freshly organized on the bases of "impressions of the shoreline"; "cities and towns"; "valleys and foothills"; "architecture of bygone days"; "the lure of the desert"; "in the mountains"; and "glimpses of the Northland." For the most part, of course, these constitute simply a stunning series of illustrations of the natural beauty of the region. In the "Cities and Towns" section and in the one called "Architecture of Bygone Days," however, the designer is given a broad cross-sectional view of the environment that man has built for himself. Mountaintop and aerial views show the clean, burgeoning quality of the major West Coast cities; the individual buildings selected for highlighting reflect the eclecticism of the architectural work that occurs here as elsewhere in America. The familiar things are included: the University of California at Los Angeles; the Berkeley campus; the elegant pomposities of San Francisco's famous Civic Center; the

(Continued on page 114)

Rolling Steel DOORS

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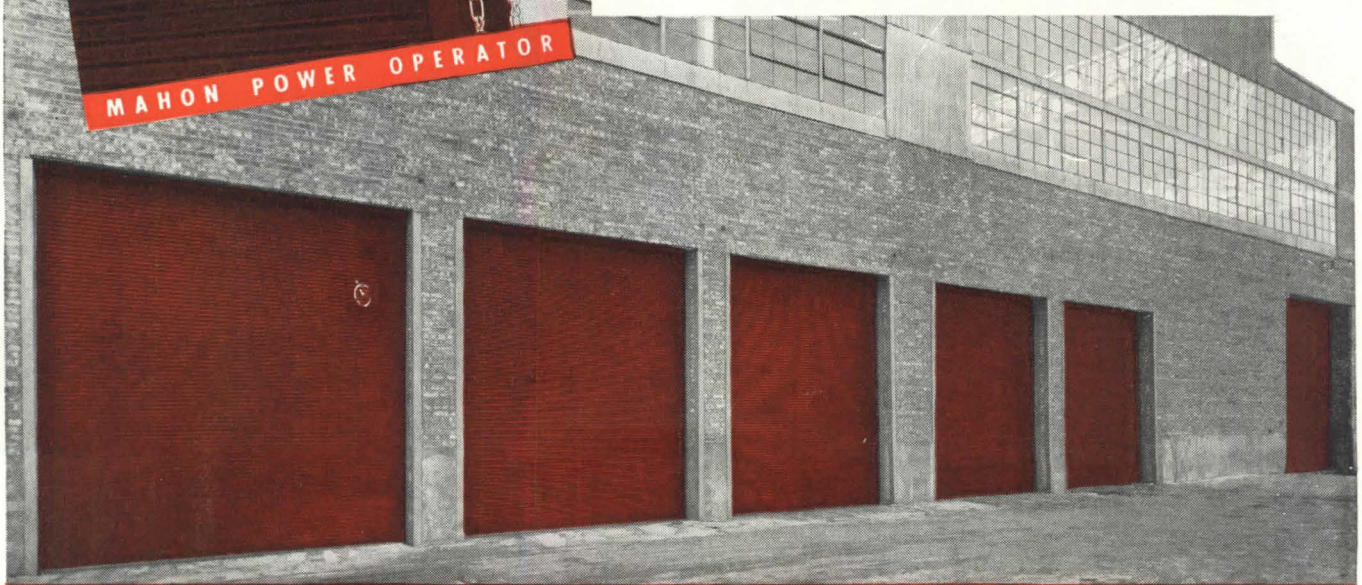

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MAHON

REVIEWS

(Continued from page 112)

incredible Spanish concoction of Santa Barbara's County Courthouse; the rather dour smokestack-like Coit Memorial Tower at the top of Telegraph Hill in San Francisco; and a few examples of more contemporary work. But it is rather surprising that there is so little of the really vital architecture of today which has prospered in the West as in no other quarter of the U. S. Among the older buildings are the simple sincerities of the familiar Missions, the unpretentiousness of an old Gold Country town, some of the excellent contemporary (of its time) work around Monterey, and a surprisingly Colonial New England house that was built in Oregon in 1846. While the arbitrary division of the book has something to recommend it, allowing one to concentrate on a single facet of the West Coast at a time, the captioning could well mislead the uninformed. Where is "Happy Valley—Santa Ynez," for instance—California, Oregon, or Washington? Or Eureka? If one is not a native son, these things are not apparent, and one can never be quite sure whether there are palm trees all up and down the West Coast, covered bridges only in Oregon, or just how it works. This is a minor fault, however; it's a beautiful book, and the use of etchings and wood engravings and lithographs adds not a little to the more usual photographic approach to such a subject.

G. A. S.

CHURCHES OF OLD NEW ENGLAND

Their Architecture and Their Architects, Their Pastors and Their People. George Francis Marlowe. Photographs by Samuel Chamberlain. The Macmillan Co., 60 Fifth Ave., New York, N. Y., 1947. 220 pp. $3.75

This is a book of antiquarian lore. Any chapter to which one may open will hold the reader's interest with its anecdotes of Puritan frailty, village eccentrics, and energetic parsons. Mr. Marlowe has steeped himself in old parish records and relates choice bits with wit and humor.

However, after reading several such chapters one longs for a connecting thread, references back and forth, an orderly treatment of the material. Of the many pages on a given parish, the majority deal at considerable length with episodes connected with buildings antedating the existing edifice, which is treated somewhat summarily with praise for its charm and enthusiams for its proportions. One becomes surfeited with anecdotes. The book cannot be used easily for reference, nor is it a history of meeting house architecture. There are no plans, no measured drawings. The subtitle gives an accurate description of this miscellany.

Evidently the author has written these chapters as independent articles, which unfortunately do not make a readable book. The material could have been grouped chronologically, or under headings such as "Finance," "Methods of Construction," "17th Century Meeting Houses," "Early 18th Century Types," "Church of England Edifices." The present arrangement can only serve as a chatty guidebook for the layman's summer tour of New England churches.

Mr. Chamberlain's photographs have suffered in reproduction; they are gray and lack sharpness and *contrast. There* is a startling lack of detail. They have been taken with an eye to romantic charm and not as documents. They have been badly cropped; too much foreground in some, tips of spires cut

(Continued on page 116)

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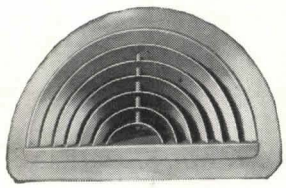

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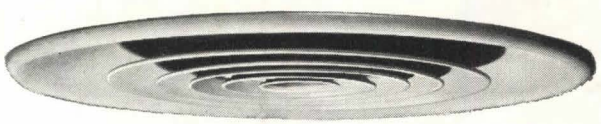

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REVIEWS

(Continued from page 114)

off in others. Admitting that it is not always possible to get clear unobstructed views, in many cases there seems to be an indifference to the architectural material which has been sacrificed for the sake of a pictorial composition. In too many instances a tree, an adjoining building, or the foreground or even the background is more striking than the ostensible subject of the photograph.

One feels that neither Mr. Marlowe nor Mr. Chamberlain has put his best foot forward in this book.

C. L. V. MEEKS

AIR CONDITIONING

Herbert and Harold Herkimer. Chemical Publishing Co., Inc., 26 Court St., Brooklyn, N. Y., 1947. 692 pp., 6" x 9", illus., index. $12.00

A good fat book, well stuffed with material collected by the senior author during his 35 years' experience in the air conditioning industry and with technical tables from the *ASHVE Guide*. It seems to cover the ground pretty thoroughly, in easily readable form. After all, it *is* a big book.

J. R.

HEAT PUMPS

Philip Sporn, E. R. Ambrose, Theodore Baumeister. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N. Y., 1947. 188 pp., 5½" x 9", illus., charts, index. $3.75

A technical treatment of the problems involved in adapting the heat pump not only to building heating and cooling but also to applications in industry: evaporation and purification of liquids, simultaneous chilling and heating of process fluids, etc. Written by men of authority, rich in bibliographical references, the book seeks to increase the knowledge of men working in this growing field.

J. R.

NOTICES

NEW PRACTICES, PARTNERSHIPS

HAROLD S. PAWLAN has associated with the office of SIDNEY C. FINCK at 134 N. LaSalle St., Chicago 2, Ill.

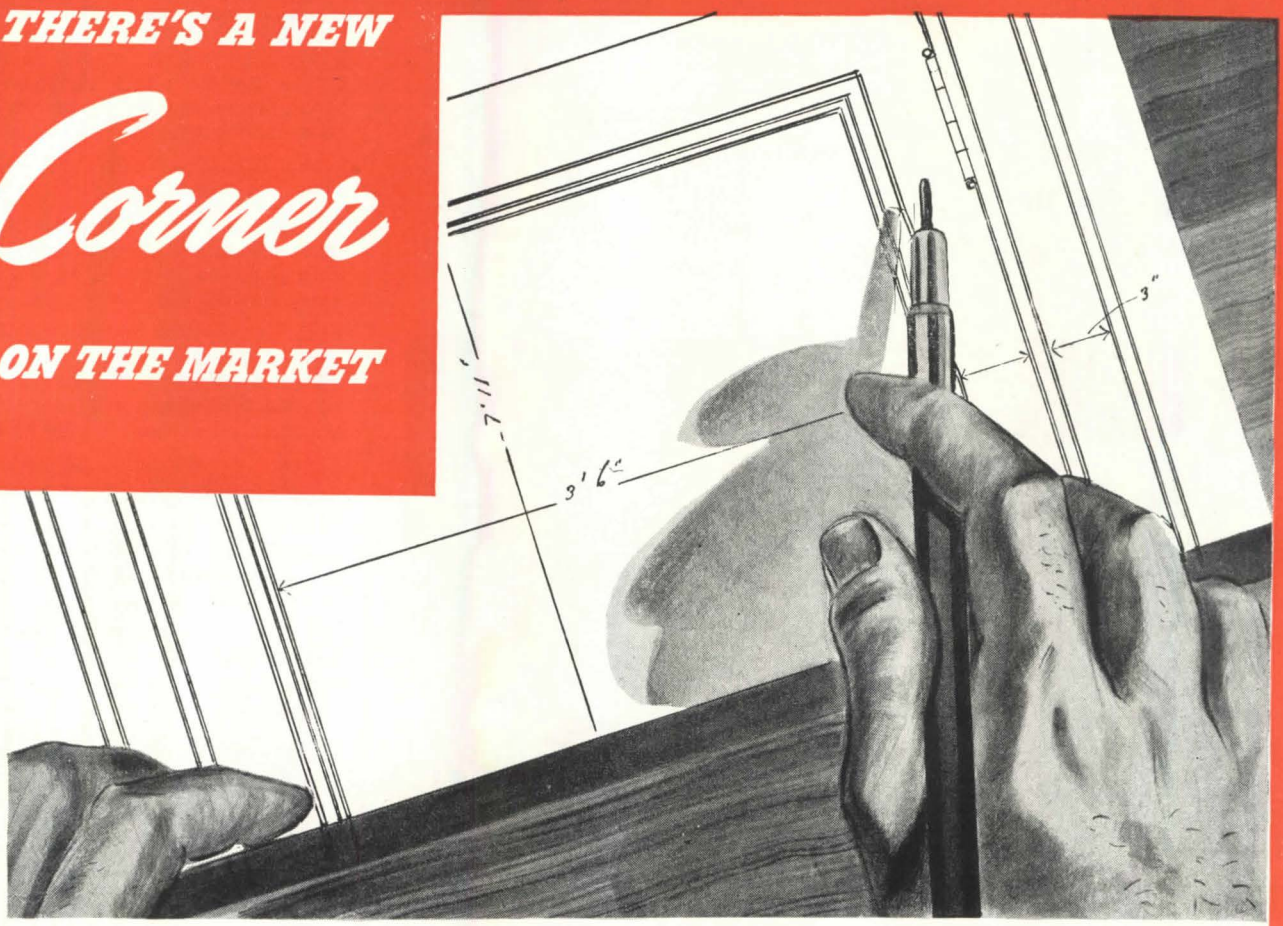
LYMAN C. GROSS has opened engineering offices at 432 Sexton Bldg., Minneapolis 15, Minn.

PRESCOTT & ERICKSON have opened a new practice at 507 Main St., Laconia, N. H.

ALBERT F. LARSON has renewed his practice with offices at 704 Graham Ave., Eau Claire, Wis.

(Continued on page 118)

THERE'S A NEW *Corner* ON THE MARKET



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NOTICES

(Continued from page 116)

BAMBERGER & REID, whose offices are at 417 Market St., San Francisco 5, Calif., have announced the association of WILLIAM HOWARD EDIE.

DAVID WILLIAM CECIL has opened an office at Spartanburg, S. C.

FRANK MONTANA and SUREN PILAFIAN have announced the consolidation of their practices in offices at 112 Madison Ave., Detroit 26, Mich.

ELIOT NOYES has opened an industrial design office at 438 E. 88th St., New York, N. Y., where he and MARCEL BREUER, architect, will act as consultants for each other in their fields.

CALLIX E. MILLER has resumed his practice at 234 Christman Bldg., South Bend 7, Ind.

JULIAN K. JASTREMSKY has announced a new practice at 19 W. 44th St., New York, N. Y.

NEW ADDRESSES

GORDON DRAKE, 4201 Sunset Blvd., Los Angeles 27, Calif.

JOHN CARROLL DUNN, 717 Washington Pl., Baltimore, Md.

CARL FREDERIK BRAUER, 120 E. 65th St., New York 21, N. Y.

WILLIAM H. MACKAY, 30 Colony St., Meriden, Conn.

CHARLES WELLINGTON WALKER, Cilco Bldg., 114 State St., Bridgeport, Conn.

FRANCIS J. HEUSEL & EDWARD H. FICKETT, 5678 Wilshire Blvd., Los Angeles, Calif.

COMPETITIONS

The Jefferson Memorial National Expansion Competition has selected the five anonymous winners of the first stage, each to be awarded a prize of $10,000. The final winner, to be announced in February, 1948, will receive the grand prize of $40,000 for the design which will set up a $30,000,000 memorial to commemorate national expansion after the Louisiana Purchase. Site of the memorial is a 35-block riverfront in the city of St. Louis, Mo.

American Institute of Decorators has announced its annual awards competition for 1947, open to designers of fabrics, furniture, floor coverings, wall coverings, and lighting. Best designs of products on the consumer market since January 1947 will receive Citations of Merit. On the Jury of Award will be W. E. S. Griswold, Jr., Carl Koch, Max Abramovitz, Samuel A. Marx, Michelle Murphy, Jack Per-Lee, and Andrew C. Ritchie. For entry forms (which must be filed by November 21, 1947) write to American Institute of Decorators, 41 E. 57th St., New York 22, N. Y.

JOBS AND MEN

NOTICE: *Advertisements for this section must be addressed* to Jobs and Men, C/O PROGRESSIVE ARCHITECTURE, 330 West 42nd St., New York 18, N. Y. Legible copy, accompanied by check or money order for $3.00, will be accepted **not later than the 5th of month preceding publication.** Insertions may not exceed 50 words.

MEN WANTED

ARCHITECTURAL DRAFTSMEN AND SPECIFICATION WRITER — familiar various phases architectural drafting. Work upon diversified, interesting projects. Opportunity for permanent position with long established firm. State education and experience. Salary commensurate with ability. Chas. H. McCauley, Jackson Bldg., Birmingham, Ala.

ARCHITECTURAL AND STRUCTURAL DRAFTSMEN—competent to develop complete working drawings and details from sketches. State starting salary expected, and address Frampton and Bowers, P. O. Box 637, Huntington 11, W. Va.

ARCHITECTURAL DRAFTSMEN — capable of taking preliminary sketches and developing working drawings and details on schools and industrial buildings. Salary commensurate with ability. Small, but busy office, plenty of opportunity for overtime. Excellent working conditions, housing may be arranged for. Apply to Walter H. Rothe, A.I.A., 333 Liberty Bldg., Yakima, Wash.

SENIOR AND JUNIOR DRAFTSMEN—several experienced men wanted by recognized, progressive New England firm. Large variety of work in all phases architectural design. Growing community; excellent salary, working conditions. Write full details. Freeman-French-Freeman, Architects, Burlington, Vt.

ARCHITECTURAL DESIGNER—experienced in modern design and capable of preparing renderings and working drawings. Permanent employment and opportunity for creative design in progressive office with large volume of schools, churches, commercial, and industrial work. Submit experience record and samples of work. Walter Wagner, Architect - Engineer, Fulton - Fresno Bldg., Fresno, Calif.

ARCHITECTURAL DRAFTSMEN—excellent openings, permanent positions for qualified personnel. Good salaries and working conditions in ideal climate. Write P. O. Box 308, Santa Fe, N. M., stating qualifications in detail.

ARCHITECTS AND ARCHITECTURAL DRAFTSMEN — with designing ability, wanted immediately for permanent positions by the National Advisory Committee for Aeronautics at Langley Field, Va. Salaries range from $2,644.80 to $4,902 per annum. Applicants should apply directly to Personnel Officer, NACA, Langley Field, Va.

SENIOR ARCHITECTURAL DRAFTSMEN—permanent positions open with Los Angeles firm of Austin, Field & Fry. Must be experienced in monumental, commercial, industrial, and educational projects. Inform fully as to education, age, salary requirements, and all other pertinent data. 629 Chamber of Commerce Bldg., Los Angeles, Calif.

INSTRUCTOR—to teach structural design and related courses to architectural students. Apply to Paul Weigel, Department of Architecture, Kansas State College, Manhattan, Kans.

CHIEF DRAFTSMAN—wanted to handle drafting room. Must be experienced in all phases of architecture, such as hospitals and commercial buildings. Submit references, salary expected, and samples of work to Michael J. DeAngelis, 1403 Temple Bldg., Rochester 4, N. Y.

ARCHITECTURAL DESIGNER — fully experienced on theatres, stores and industrial work. Must be capable of executing working drawings and details and of directing such effort. Permanent connection can be offered to qualified applicant in large architectural-engineering organization. Send record of experience and samples of work. Marr and Holman, 701-703 Stahlman Bldg., Nashville, Tenn.

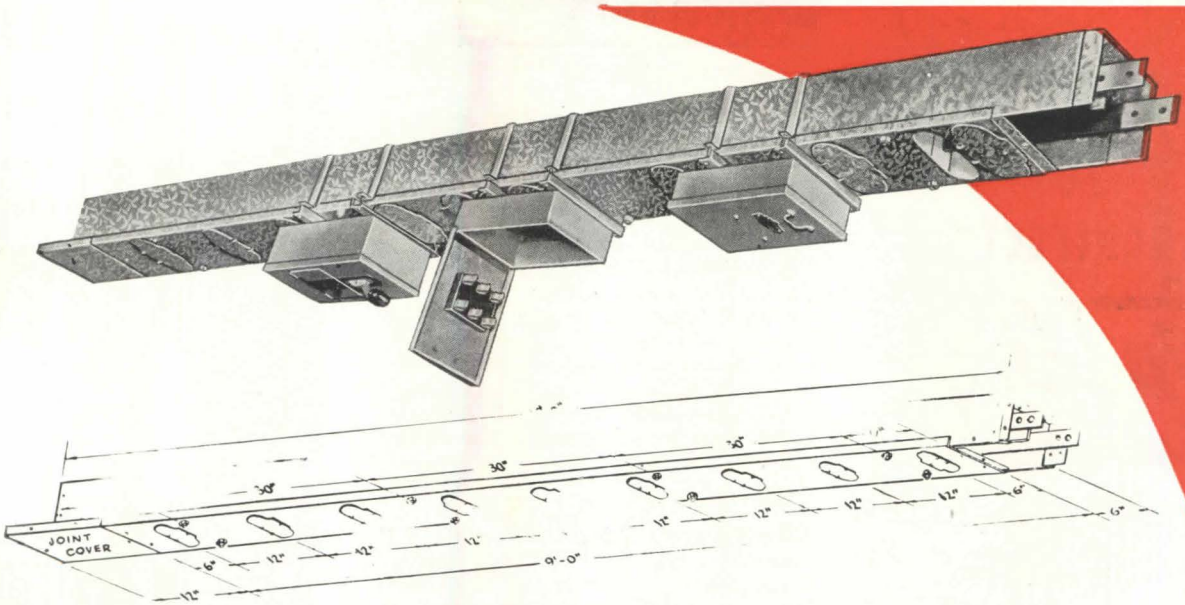
STRUCTURAL ENGINEER—with good experience who can design and make drawings for structural and reinforced concrete. Permanent position can be offered to properly qualified applicant in large architectural-engineering organization. Send record of experience and samples of work. Marr and Holman, 701 - 703 Stahlman Bldg., Nashville, Tenn.

MECHANICAL ENGINEER — fully experienced in making designs, working drawings, and writing specifications for heating, plumbing, and air conditioning. Permanent connection in large architectural-engineering office can be offered to properly qualified applicant. Send record of experience and samples of work. Marr and Holman, 701-703 Stahlman Bldg., Nashville, Tenn.

ARCHITECTURAL DESIGNERS AND DRAFTSMEN—wanted for work of long duration in southwestern United States. Give details of experience, salary requirements, and date available. Box 69, PROGRESSIVE ARCHITECTURE.

TOP ARCHITECTURAL DESIGNER—must be renderer, draftsman, modern designer with background of historical architecture. University graduate supplemented by European travel and study or training at the American Academy in Rome. Good background, diplomatic, pleasing personality. Prospective future

(Continued on page 122)



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JOBS AND MEN

(Continued from page 120)

partnership. Give complete information and references. Box 70, PROGRESSIVE ARCHITECTURE.

YOUNG ARCHITECT—with initiative and imagination. Five to ten years' experience, preferably commercial, industrial, and institutional work. Must have or be eligible for Pennsylvania registration. Excellent opportunity for permanent position and possibly membership in firm if mutually satisfactory. State education, experience, age, and salary desired. Location, northwest Pennsylvania. Box 68, PROGRESSIVE ARCHITECTURE.

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ARCHITECT-ARTIST AND DELINEATOR—of long experience, offers services for free-lance architectural renderings and perspectives, bird's-eye views of architectural treatment of engineering structures such as highways and bridges. Theodore A. de Postels, A.I.A., Studio at 644 Riverside Drive, New York 31, N. Y. AUdubon 3-1677.

ARCHITECT—registered New York and New Jersey, many years' experience in residential work. Will complete working drawings from sketches for architects not wishing to devote time to this class of work. Expert, clean drafting. Specifications included if desired. Box 63, PROGRESSIVE ARCHITECTURE.

PARTNERSHIP WANTED BY TWO ARCHITECTS—Chicago area. Illinois registration, National Council of Architectural Registration Board's certificate. Broad general experience. Modern design background. Box 71, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL ENGINEER—licensed, 29 years old, married, one child. Degrees in architecture and civil engineering. Eight years' experience in architectural and structural design, land planning, and municipal engineering. Desires opportunity to affiliate with small organization offering future partnership. Prefers location in South or Southwest. Box 72, PROGRESSIVE ARCHITECTURE.

Statistically, one out of every 50,000 to 100,000 administrations of combustible anesthetics results in a fatal explosion accident. How many occur with less than fatal consequences is anybody's guess; publicity for such events is not eagerly sought. Complete explosion-proofing of all equipment in the operating room is the only way to eliminate this terrifying hazard.

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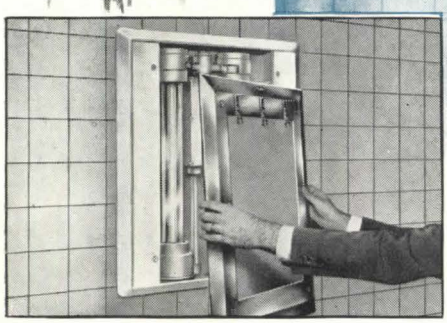
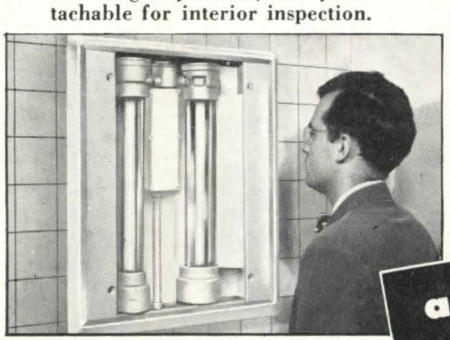


Entire front frame assembly is affixed to lamp box by self-retaining key locks; easily detachable for interior inspection.



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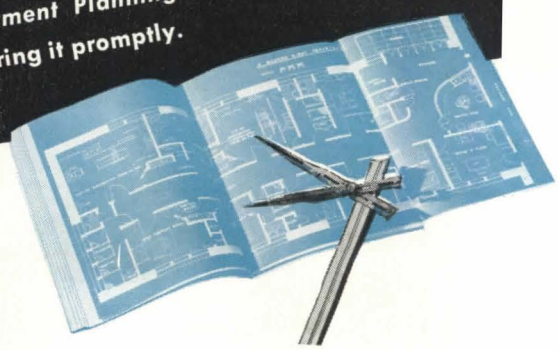

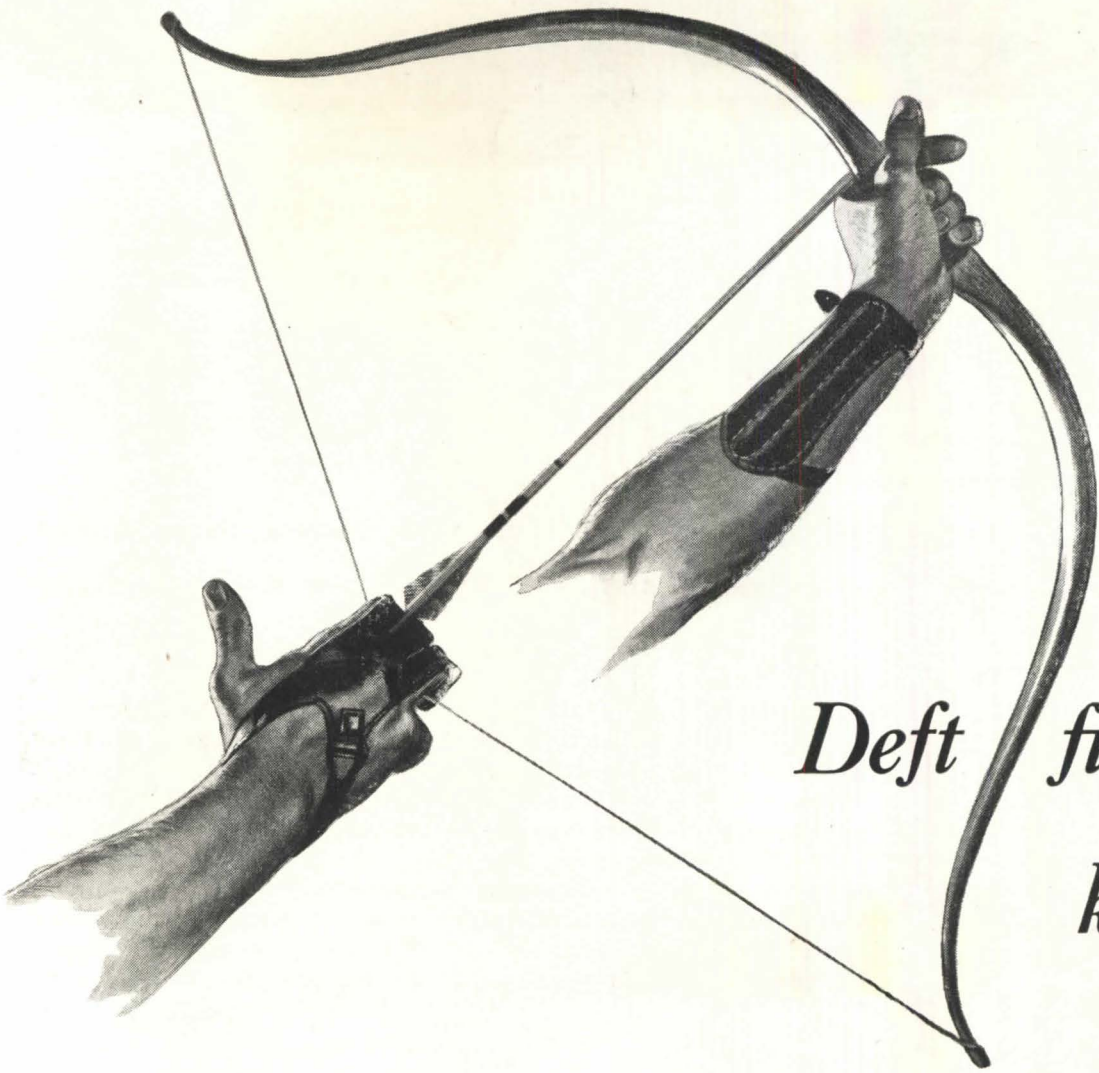

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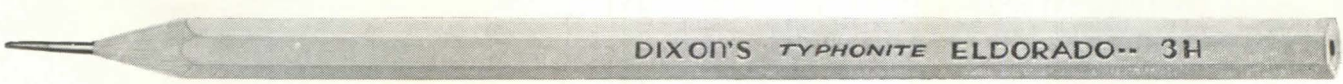

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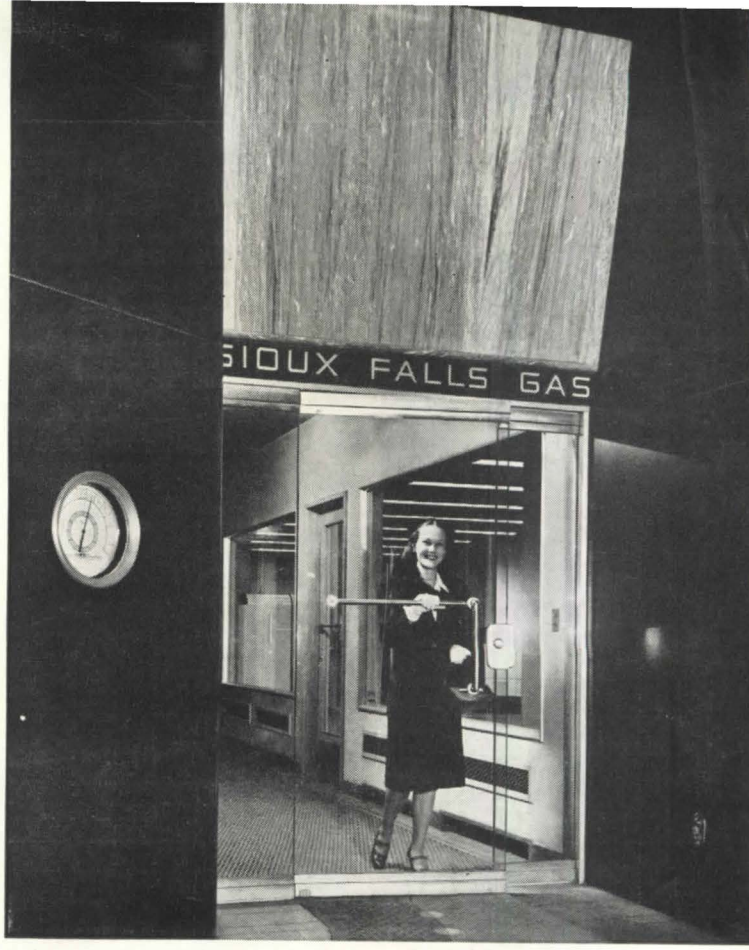
for using an Overhead Concealed Door Closer rather than the Floor type:

1 THE INSTALLED COST IS LESS

2 IT IS MORE EFFICIENT

3 MAINTENANCE IS FAR LESS



Entrance door with LCN Overhead Concealed Closer; Harold Spitznagel, Archit

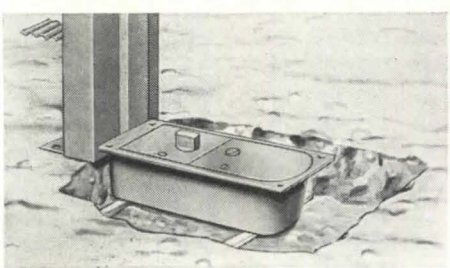
Why the installed cost is less

While the price of the overhead concealed closer itself is about the same as that of the floor type, the cost of installing the floor closer is a good deal more.

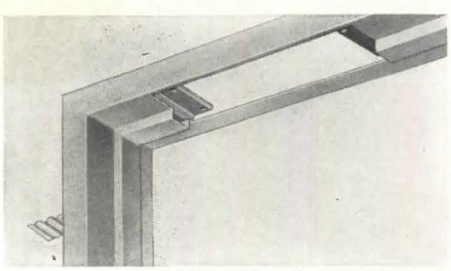
A recess must be prepared in the floor, by setting a form while the floor is poured or by chipping out the concrete after the rough floor is in. Beams and conduits often make locating the closer difficult.

If a threshold is used it must be of the box type or one specially cut and drilled to take the closer, both expensive.

Contrast all this with securing an overhead closer and arm into openings blanked out of a metal frame and door at the factory, or easily cut into a wood head frame and door. With job costs what they are today the architect must consider these points.



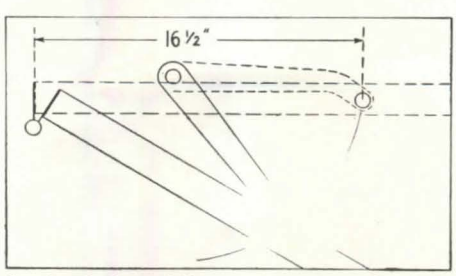
Floor type closer set for grouting



Frame prefabricated for overhead concealed closer

Why it is more efficient

The big reason for greater efficiency in an overhead door closer lies in its position farther out from the hinge edge of the door than is practical with a floor closer. This gives much greater leverage, better performance and less strain on the closer.



Overhead closer delivers power more effectively

Regulation is also easier with the overhead closer, all adjustments being easy to reach without removing anything.

Why maintenance is less

Take two closers of the same basic design (LCNs for instance); the overhead closer will outlast the floor type for two reasons: (1) Its location permits a more effective job, for a given capacity, with less need of repairs; (2) it avoids the abuses of floor dirt, scrub water, etc. which always foul floor type closers and shorten their lives.

We make both types

We cite these comparisons without prejudice, since the LCN line includes three types of floor closers which do their job as well as any such closers made. Many thousands are in constant use. But we know that the overhead closer works better, for a longer period, with far less attention and at lower cost, than the floor type. LCN catalog 11b with full explanation gladly sent at your request; no obligation. Address LCN, 466 W. Superior St., Chicago 10, Ill.

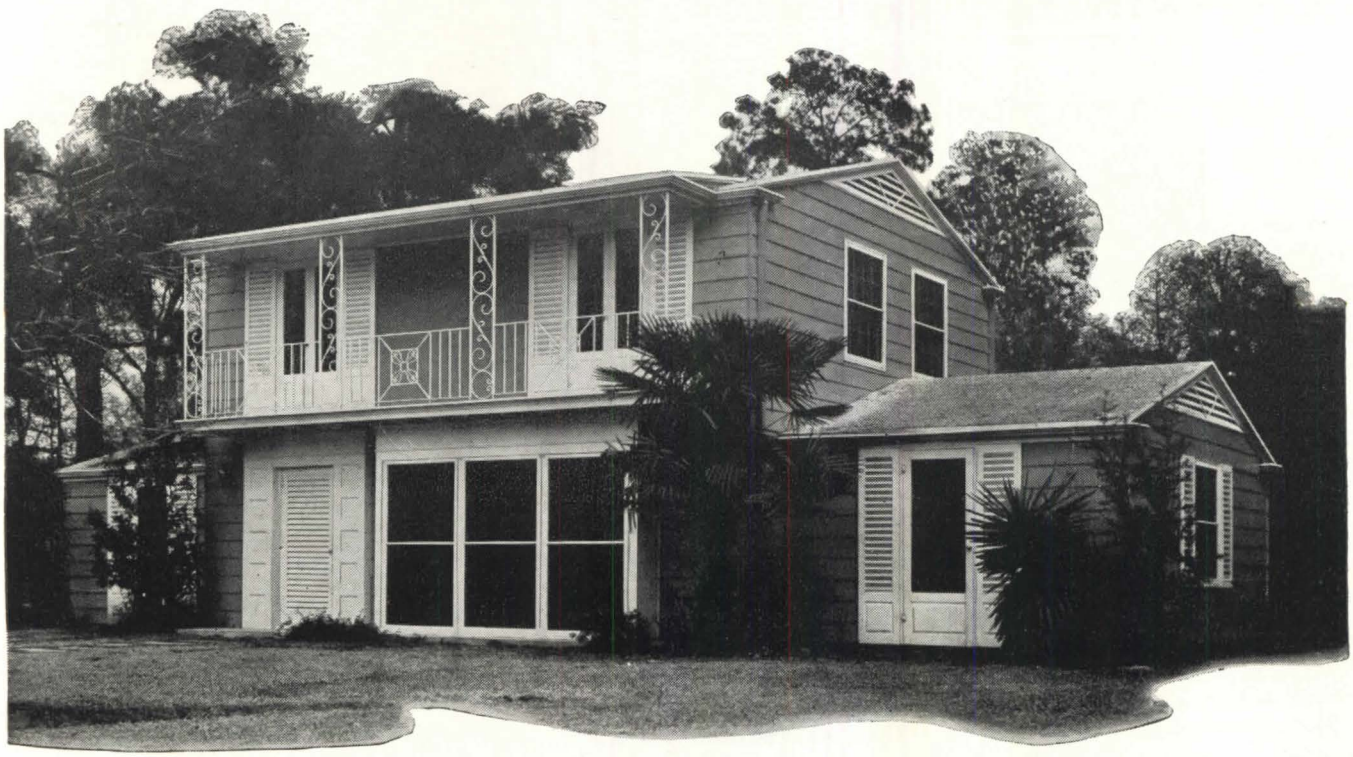
LCN

Overhead and Floor Type

Concealed *and* Surface Type Door Closers

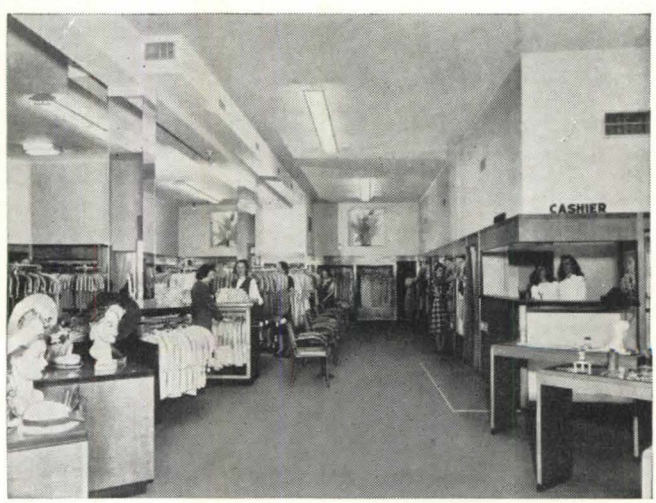
Here is the ideal year-round air

SERVEL *ALL-YEAR* GAS AIR SEASON COMFORT, PROMOTES



The home of Architect Otto Woestemeyer, 2351 Claremont Ave., Houston, Texas, features the year-round comfort of Servel *All-Year* Gas Air Conditioning. Mr. Woestemeyer says, "The summer cooling provided by Servel is most welcome in this warm, moist climate. The air filtering qualities of Servel are superb. Operating costs have been amazingly low."

"We are entirely satisfied with the performance of our Servel," writes Gordon Brown, 4519 Firestone Blvd., South Gate, California. "The comfortable condition of our building is complimented by everyone and is the delight of our employees."



Customers and employees alike appreciate the comfortable indoor temperature and humidity that Servel *All-Year* Gas Air Conditioning maintains the year round in Silverstein's Women's Apparel Store, 342-344 DeSiard Street, Monroe, Louisiana.

conditioner for offices, stores, homes

CONDITIONER PROVIDES ALL-HEALTH, EFFICIENCY, BUILDS PROFITS

Connie's Prescription Shop, 1209 North Walker, Oklahoma City, Oklahoma, is kept comfortably cool in summer, warm in winter by the Servel *All-Year* Gas Air Conditioner. C. J. Masterson, proprietor, reports, "Our Servel Conditioner has been 100 per cent satisfactory."

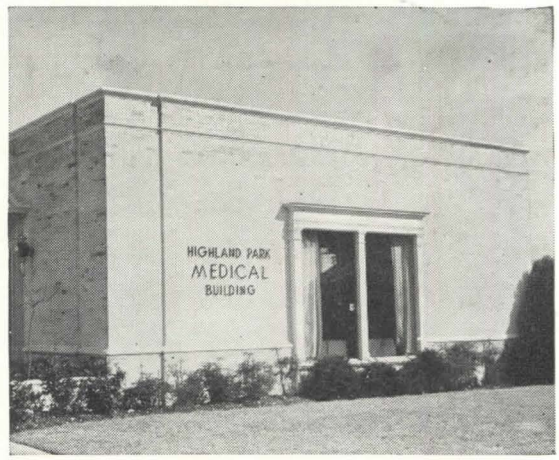
YOU'RE on safe ground when you recommend Servel *All-Year* Gas Air Conditioning. Hundreds of installations are operating successfully from coast to coast. And users everywhere are enthusiastic.

Home owners praise the just-right temperatures, the dehumidified, dust-free indoor climate provided by Servel through every season. Business and professional men report rises in employee health and efficiency, reduced absenteeism. Merchants tell of increased patronage, higher sales volume. All agree that the benefits of Servel *All-Year* Gas Air Conditioning will more than pay for it in a short time.

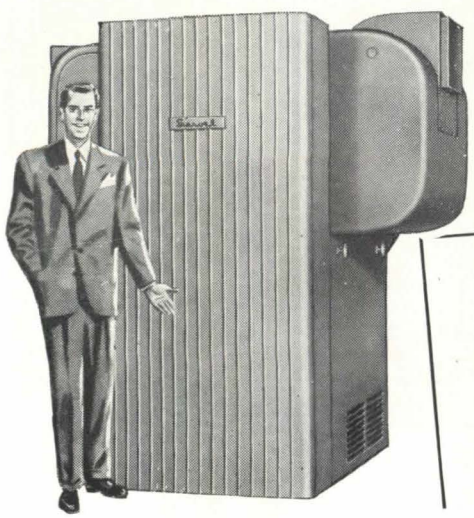
One Unit Does Year-round Job

The reason for this tremendous success is that the Servel Conditioner is completely different from any other air conditioning unit. Servel is a complete air conditioning system *in one unit*, operating through scientifically designed ducts and registers. In summer, Servel refrigerates and dehumidifies air. In winter, Servel heats and humidifies it. Servel also filters out dust, dirt and irritating pollen.

Whenever you are planning new construction that would benefit from the advantages of Servel *All-Year* Gas Air Conditioning, be sure to tell your clients about it. For additional testimony about specific applications, get in touch with your local Gas Company. Or write to Servel, Inc., 4711 Morton Avenue, Evansville 20, Indiana.



Patients, doctors and nurses in the Highland Park Medical Building, 5450 Preston Road, Dallas, Texas, all enjoy Servel-supplied cool, clean, invigorating air in summer and clean, draft-free warmth in winter.



TRIED . . . PROVED . . . SUCCESSFUL

(From Boston to San Diego . . . From Bismarck to Miami)

The Servel *All-Year* Gas Air Conditioner is already operating successfully in hundreds of installations from coast to coast. Some have been running for more than seven years. The equipment is tried, tested . . . and *approved* by users everywhere.

Servel

***All-Year* GAS AIR CONDITIONER**

'argest ALL-METAL Commercial Group in the World...

Has Q-Floors and Q-Panels

Q-PANELS are insulated, metal wall-building units 2′ wide and up to 25′ long.

Thermal insulation value surpasses 12″ dry masonry. Weight—less than five pounds per sq. ft. Wall area equal to ⅓ acre can be erected in one day by only 25 men. Surfaces of aluminum, steel, stainless or Galbestos, flat or fluted.

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Both have many construction advantages, especially under present conditions. You can see the electrical fittings at any General Electric construction materials distributor's. For detailed data, write.

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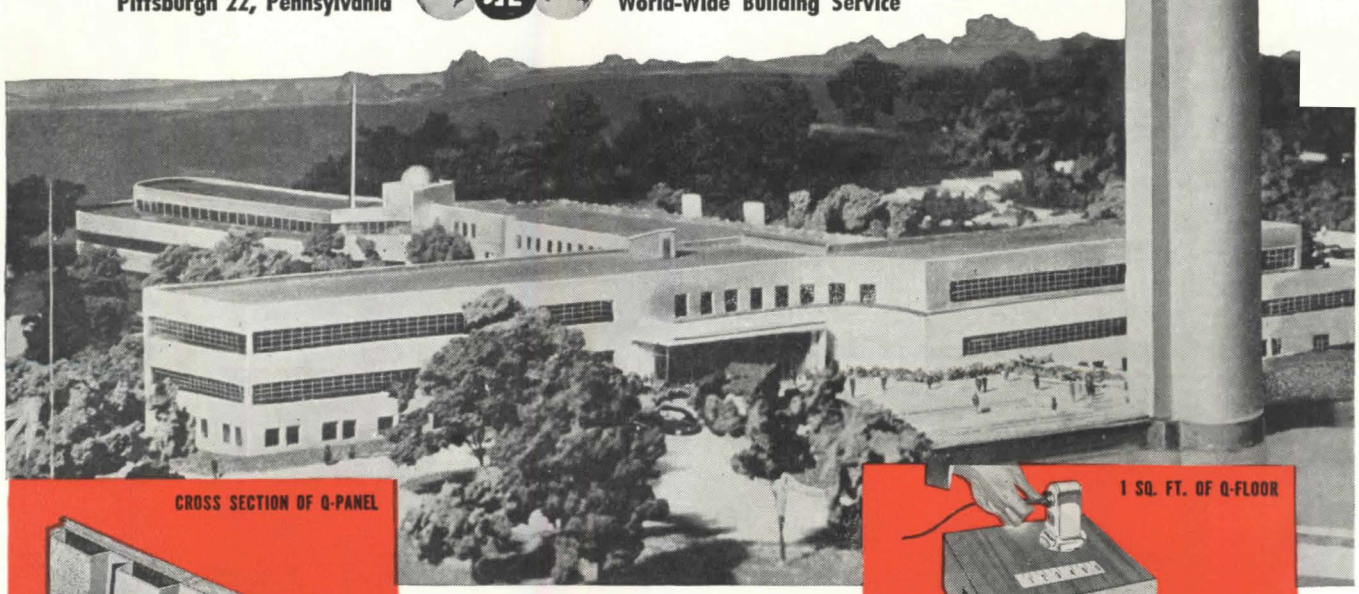
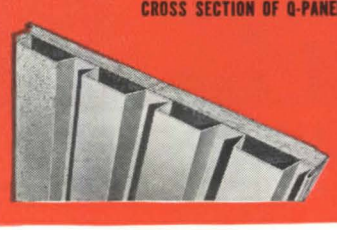
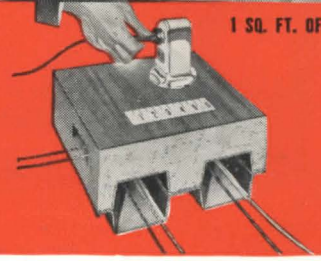


CROSS SECTION OF Q-PANEL



Federal Telecommunications Laboratories
Nutley, New Jersey
Giffels & Vallet, L. Rosetti,
Architects and Engineers

1 SQ. FT. OF Q-FLOOR



Many Styles of HALLOWELL steel stools and chairs

Fig. 200 MHB

Fig. 200S

Fig. 200 RHB

"Hallowell" Stools and Chairs of Steel are made in a wide variety of styles and types to meet your every "seating" requirement . . . and designed for comfort while working. They are of sturdy, welded construction . . . available in fixed or adjustable heights . . . with or without back rests and foot rests . . . and in a full range of heights. For complete information about these long-wearing, wobble-proof, comfortable factory stools and chairs, write for your "Hallowell" Catalog.

"Hallowell" Products are sold entirely through Industrial Distributors.

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BY JAMESTOWN METAL CORPORATION

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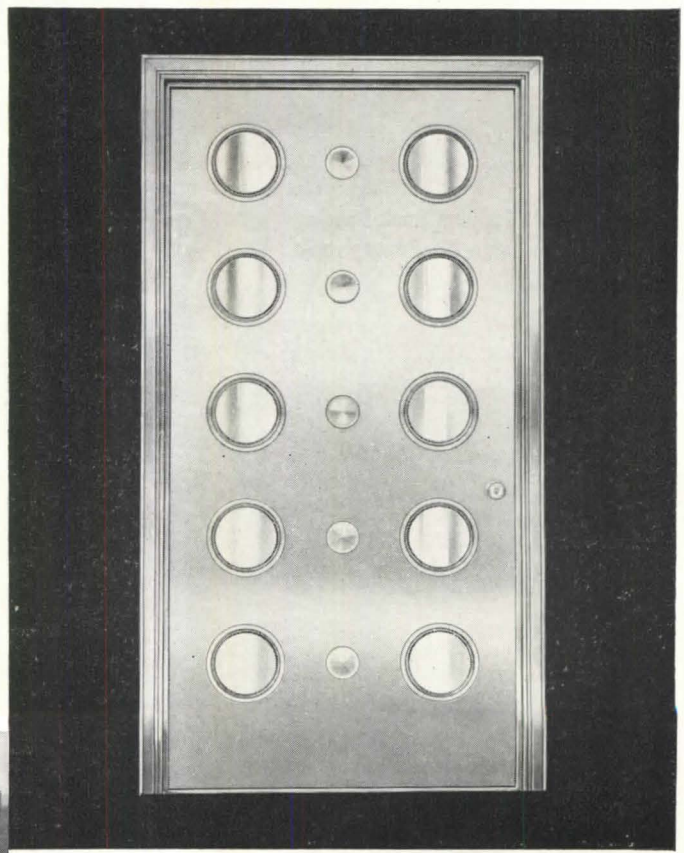
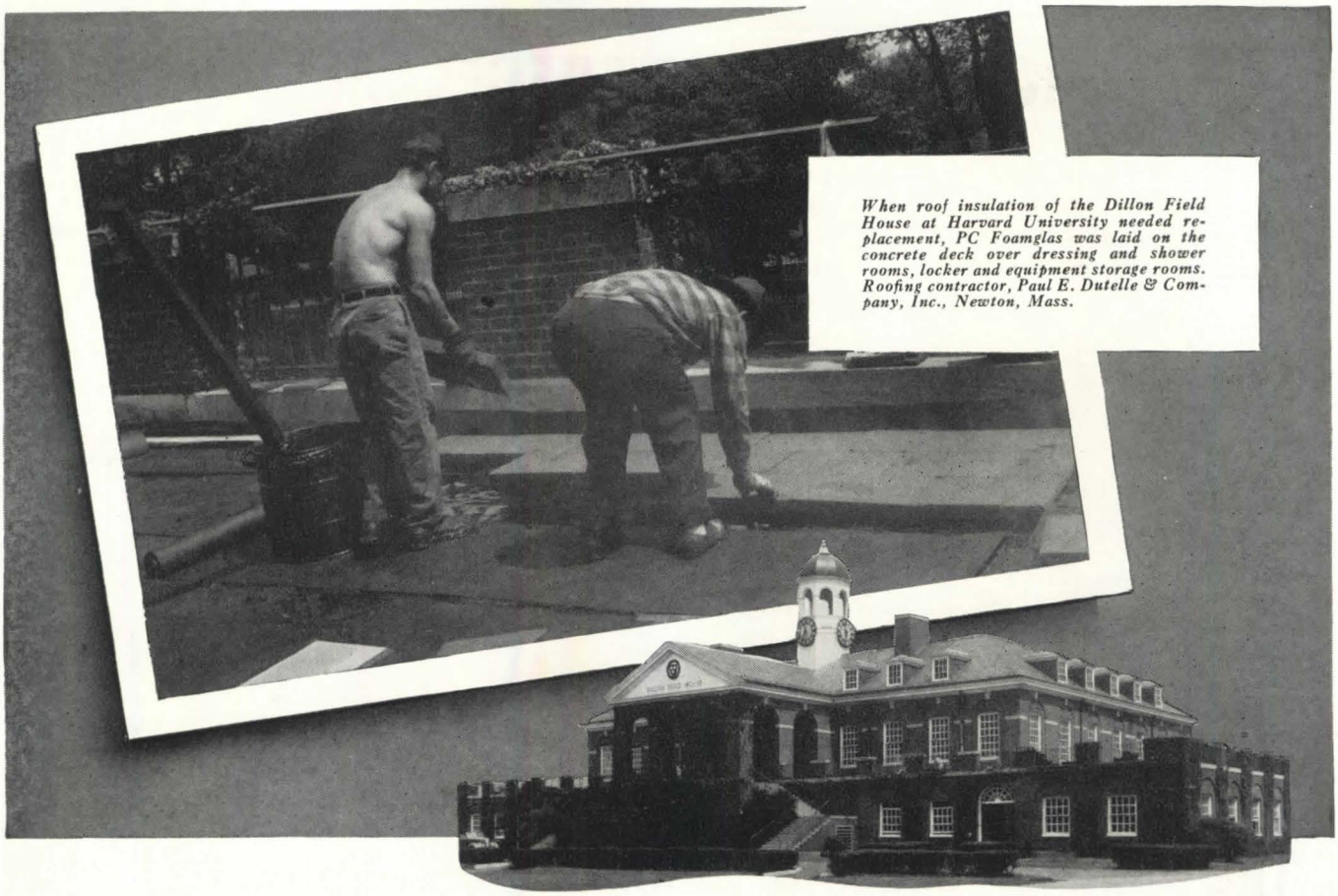
As specialists in the fabrication of bronze, aluminum, steel and stainless steel, we offer our services wherever hollow metal doors, interior trim, elevator enclosures, office partitions, cold rolled mouldings and metal specialties are required.

Main Factories and Offices of Jamestown Metal Corp.



Entrance door — GORDON FOODS, Inc.
Louisville, Kentucky
LESLIE V. ABBOTT — *architect and design engineer*



When roof insulation of the Dillon Field House at Harvard University needed replacement, PC Foamglas was laid on the concrete deck over dressing and shower rooms, locker and equipment storage rooms. Roofing contractor, Paul E. Dutelle & Company, Inc., Newton, Mass.

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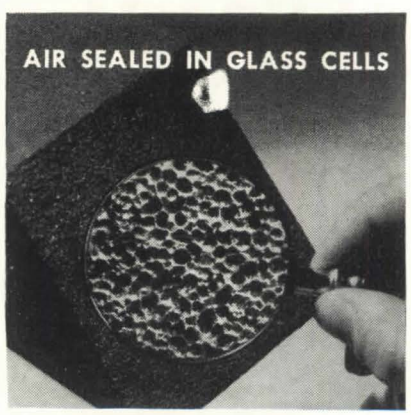

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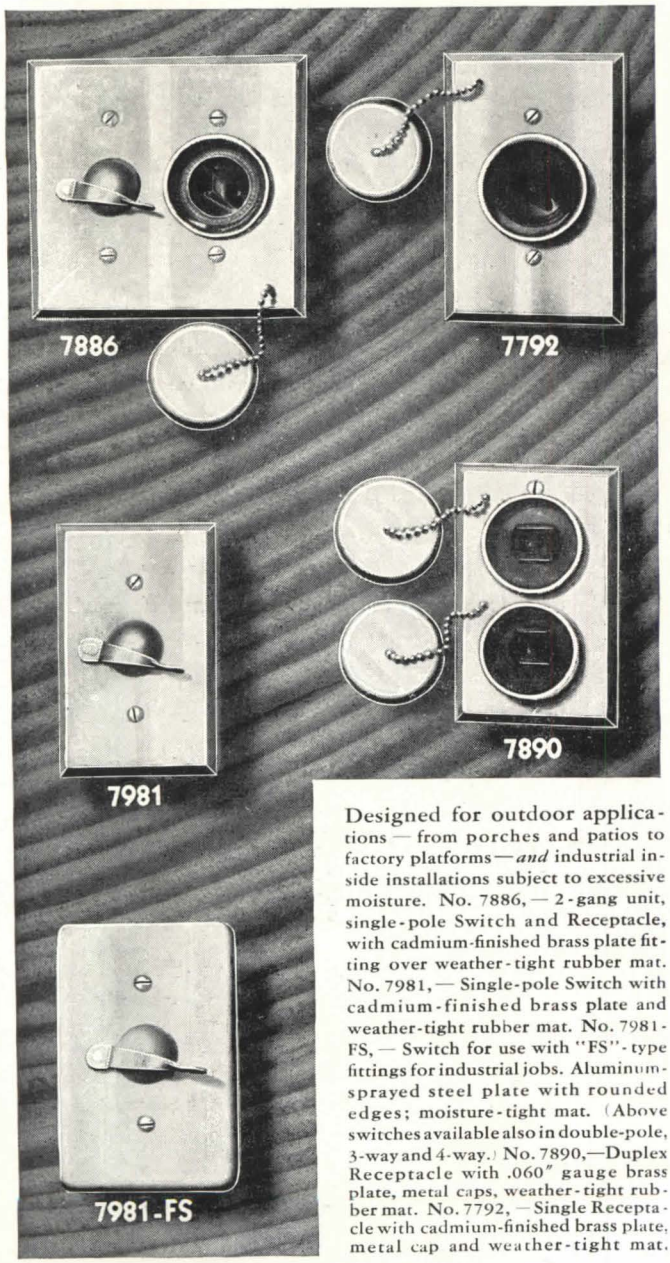
LIGHTWEIGHT THREADLESS RIGID STEEL RACEWAY

H&H WEATHER-PROOF

OUTDOOR SWITCHES AND RECEPTACLES



Designed for outdoor applications — from porches and patios to factory platforms — *and* industrial inside installations subject to excessive moisture. No. 7886, — 2-gang unit, single-pole Switch and Receptacle, with cadmium-finished brass plate fitting over weather-tight rubber mat. No. 7981, — Single-pole Switch with cadmium-finished brass plate and weather-tight rubber mat. No. 7981-FS, — Switch for use with "FS"-type fittings for industrial jobs. Aluminum-sprayed steel plate with rounded edges; moisture-tight mat. (Above switches available also in double-pole, 3-way and 4-way.) No. 7890,—Duplex Receptacle with .060" gauge brass plate, metal caps, weather-tight rubber mat. No. 7792, — Single Receptacle with cadmium-finished brass plate, metal cap and weather-tight mat.

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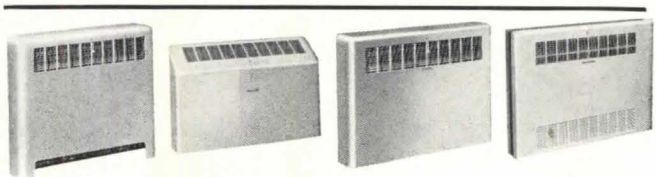

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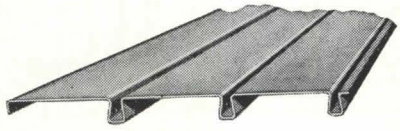
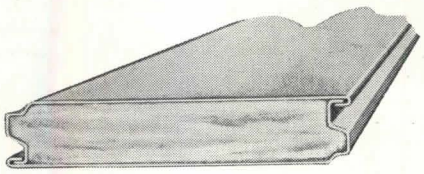
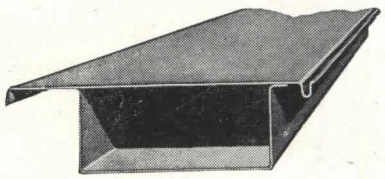


HOLORIB ROOF DECK. Steel sheets reinforced by three integral triangular ribs on 6″ centers. Provides flat surface for mopped application of insulation and roofing. Sheets 18″ wide, in lengths as required for purlin spacing. Gages 18 and 20 are standard.



TYPE C FOR WALLS. Composed of two metal members pressed together, with felt at each side to prevent metal-to-metal contact. Filled with insulation at the factory. Standardized in 3″ depth and 16″ width, in 18 gage painted steel or 16 B & S gage aluminum.



TYPE D FOR FLOORS. Box beam formed by welding together two steel sections. Side laps interlock to form continuous flat surface. Cover plates available for open cells to provide two flat surfaces. Standardized in 16″ width. Depth 1½″ to 9″. Gages 18 to 12.

Fenestra
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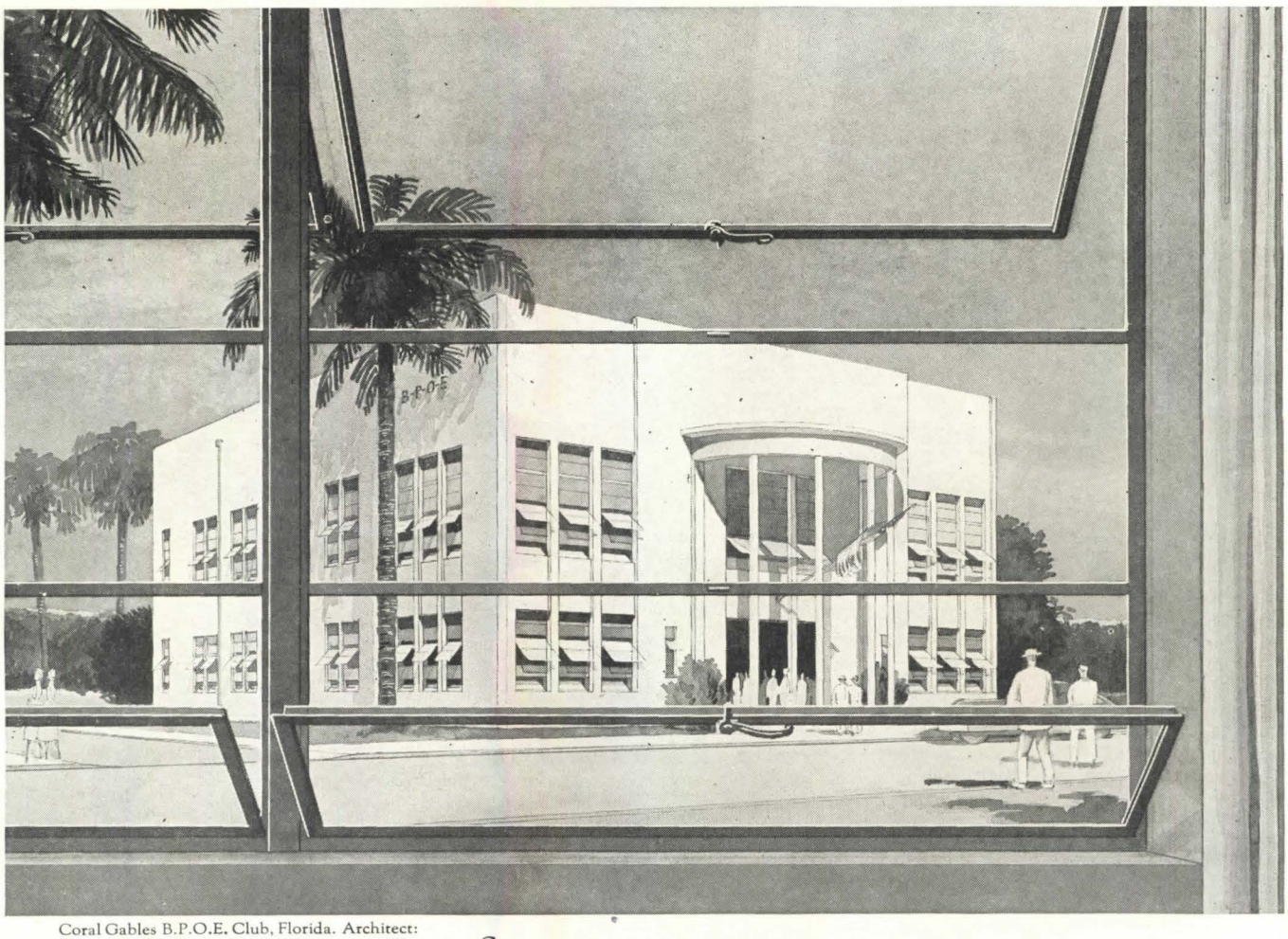

Coral Gables B.P.O.E. Club, Florida. Architect: Edward T. Rempe, Jr. General Contractor: The Mackle Company.

See how Lupton Metal Windows say "welcome" to the great outdoors. Narrow frames lend themselves to contemporary design. Combination of outswinging and inswinging panels assures controlled, natural ventilation. Screens with neat, unobtrusive frames are easily attached from inside the building. Lupton Metal Windows are ideal for any climate. Admit maximum daylight. Provide permanent weathertightness. Made for every type of building—industrial, commercial, residential. Write for our Catalog or see it in Sweet's.

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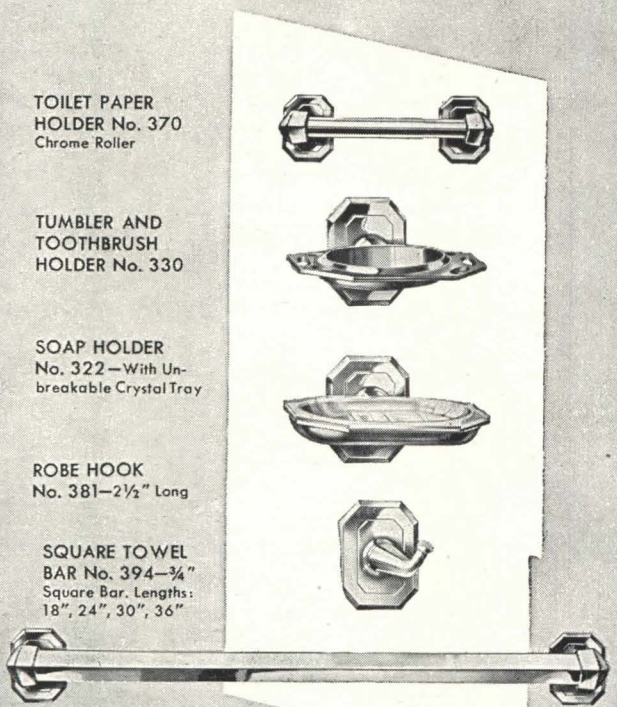
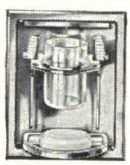
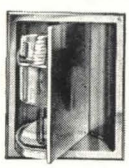
No. 322—With Unbreakable Crystal Tray

ROBE HOOK
No. 381—2½" Long

SQUARE TOWEL BAR No. 394—¾"
Square Bar. Lengths: 18", 24", 30", 36"







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U. S. Patent No. 2,039,065

No. 338—OPEN
Soap Dish, Tumbler and Toothbrush Holder exposed for use.

No. 338—TURNING
Turned at the touch of a finger.

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Toothbrushes, Soap and Tumbler hidden from sight.

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TONTINE
THE WASHABLE WINDOW SHADE

W. A. MUNSON SHADE FACTORY
PHONE SOUTH SHORE 4780

Sept. 11, 1947

Wade Manufacturing Co.,
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For many years we have been struggling with this problem and only recently have discovered that the WADE Sealed Air Chamber can eliminate not only the noise but also the excessive damage to our piping system. The #6 Jr. WADE Sealed Air Chamber was recently installed and since that time we are able to operate at any time during the day or night with complete protection for our piping system. We can say without any qualification whatsoever that the WADE Sealed Air Chamber is the only answer to our problem we have seen.

Very truly yours,

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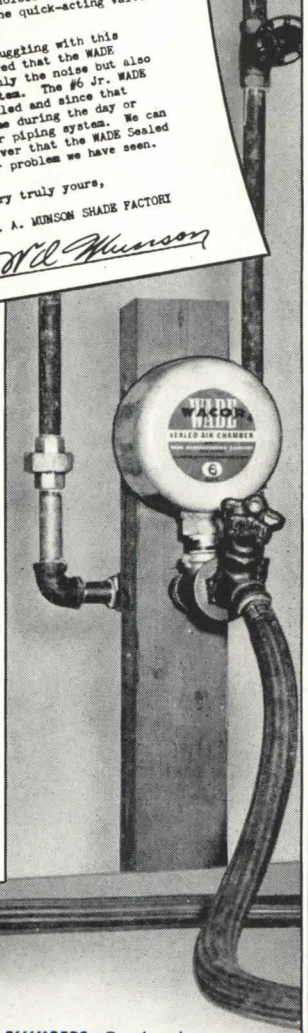
W. A. Munson

Third Example in a Series



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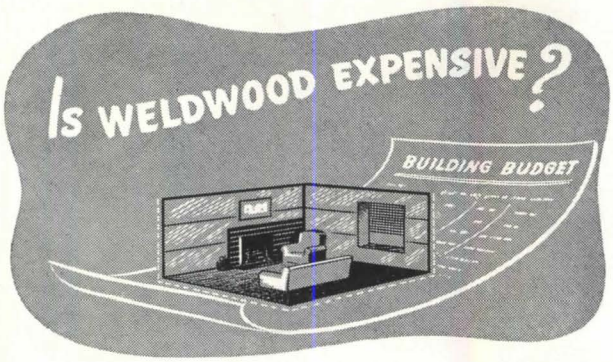
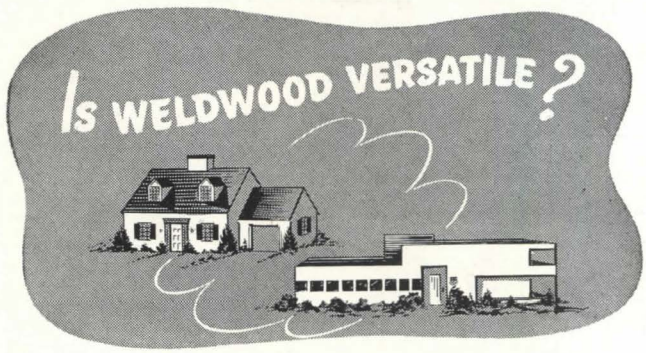


No. We'll readily admit a Weldwood-paneled room looks like a million. But when maintenance expense over the years is considered, a room paneled in Weldwood compares favorably in cost with ordinary plaster, paint and paper...both for new construction and remodeling.

Fact is, you can do a 12 x 18 room in Birch Weldwood for less than $300**. . . materials *and* installation. Stop and think how little that adds to monthly FHA payments, with a home improvement loan.

Many of your clients know this!



Yes, indeed. Choose your style, then choose Weldwood for the interior. There's a wood for every mood. You'll find exactly what's needed for traditional effects; also beautiful woods for sleek, modern twentieth-century surroundings. Use Weldwood in several rooms, or just one. Do all four walls, even one wall, or simply the dado.

And you can work many clever, "built-in" miracles with Weldwood, for it provides structural strength as well as decorative beauty.

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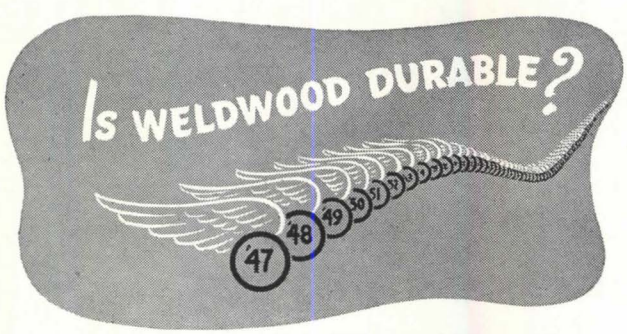

It is. Weldwood Plywood Panels are guaranteed for the life of the building in which they're installed.

And they'll remain luxuriously beautiful with a minimum of maintenance. No recurrent expense for papering and painting.

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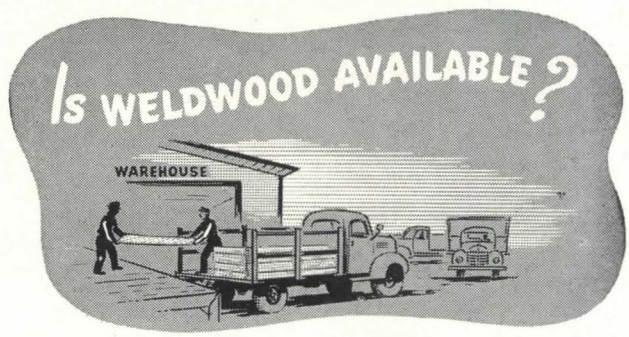

Yes, right now. Most grades and varieties of Weldwood . . . especially the decorative hardwoods . . . can be obtained immediately in the most popular sizes and thicknesses.

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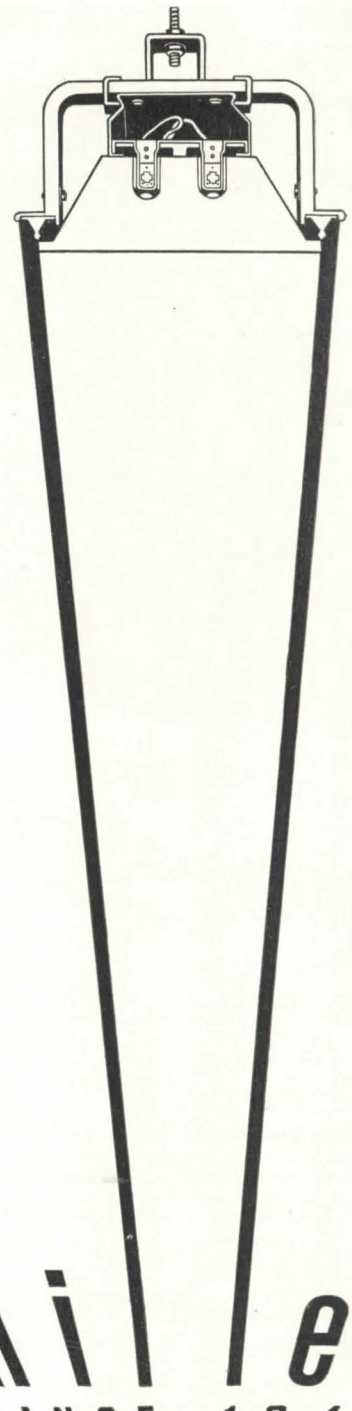

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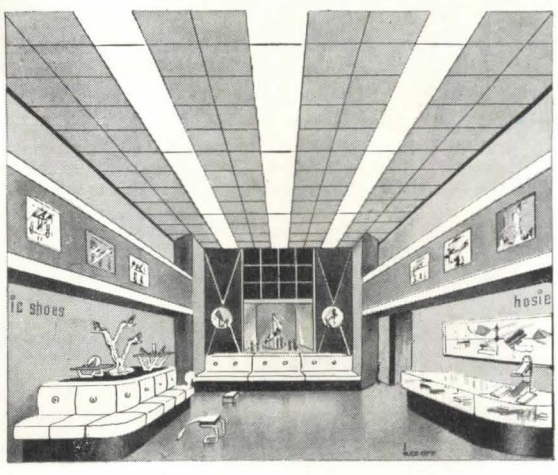

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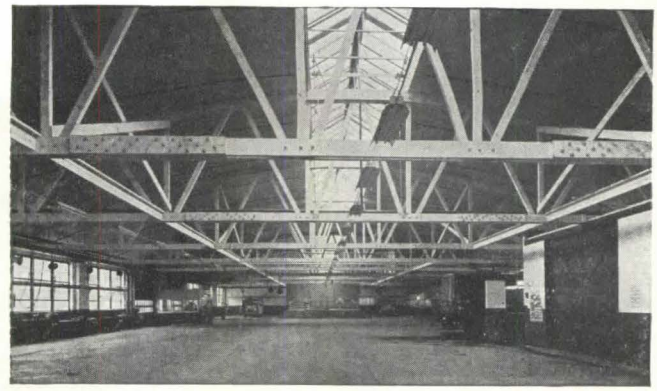

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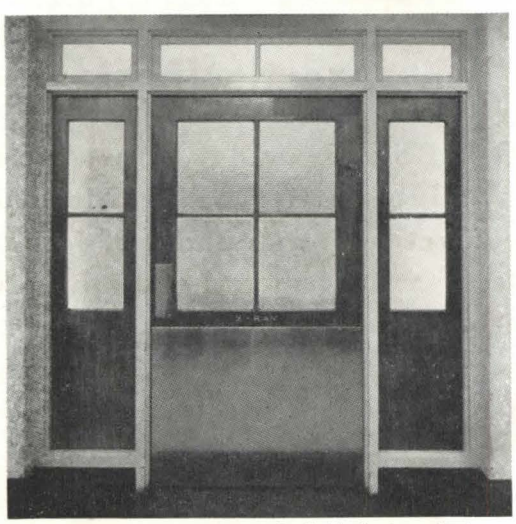

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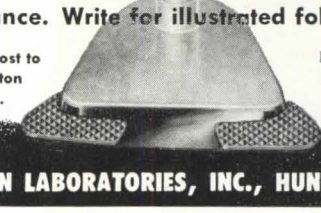

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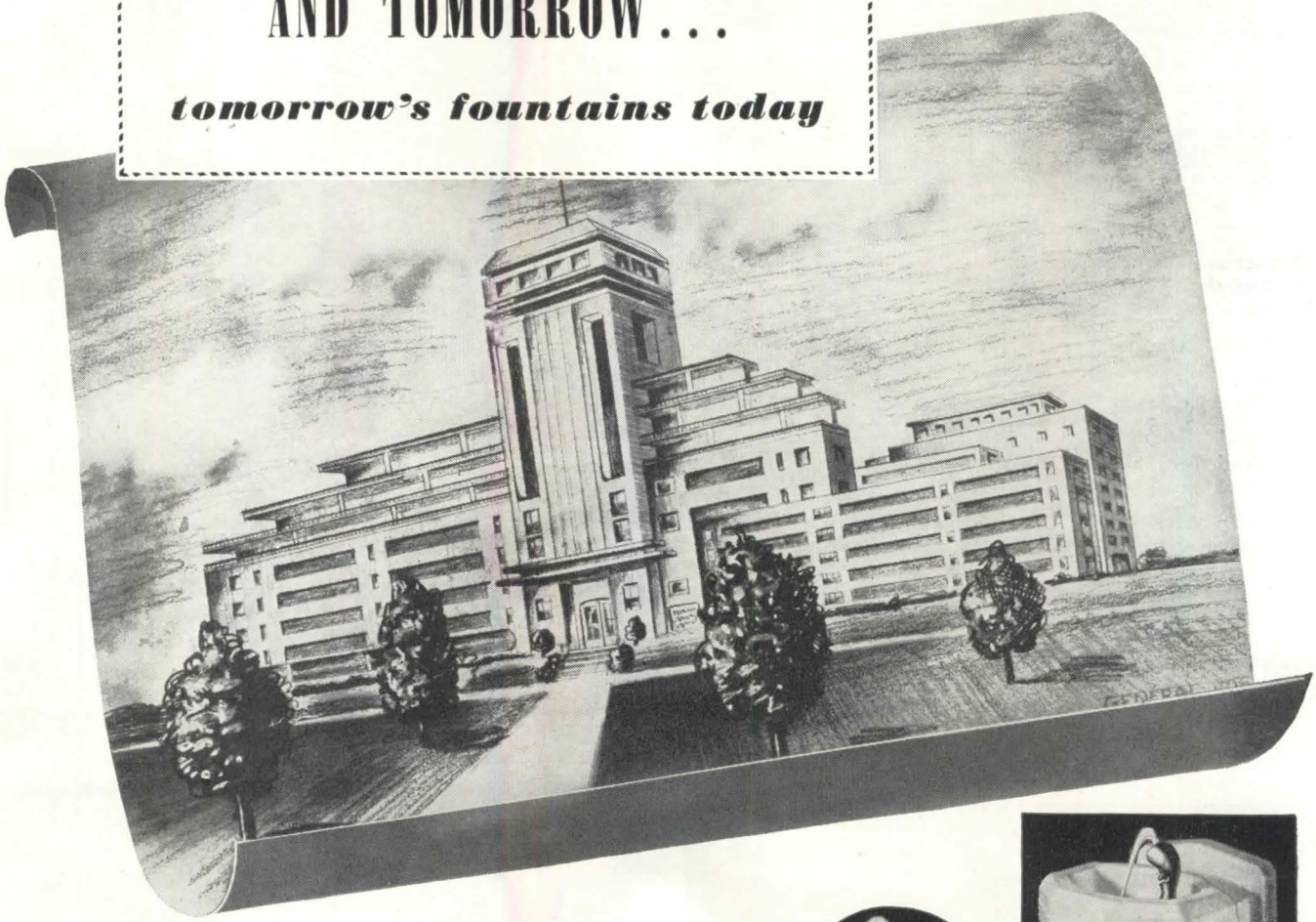

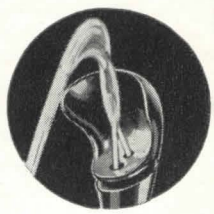

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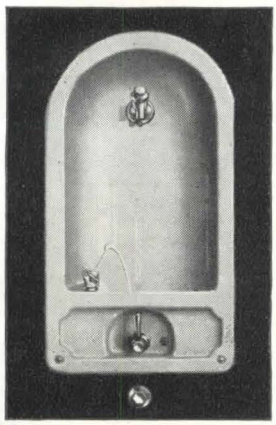

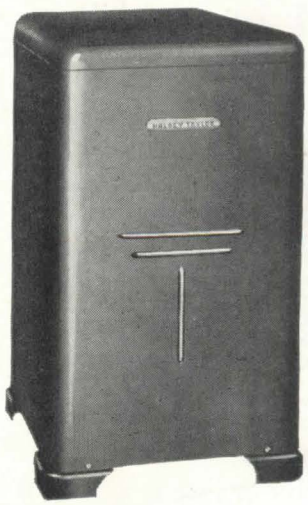

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AND FOR BLONDE, MODERN FINISHES, use White or Tinted Firzite, wiped off! For tints, merely add colors in oil to White Firzite. Also excellent for undercoats, because it *seals as it coats.*

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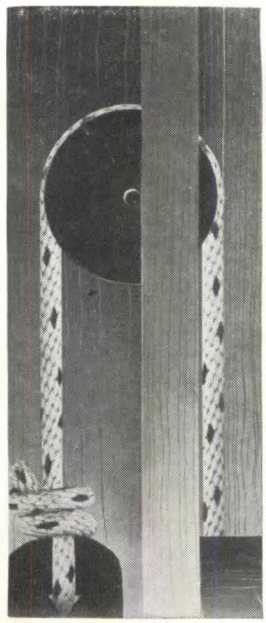

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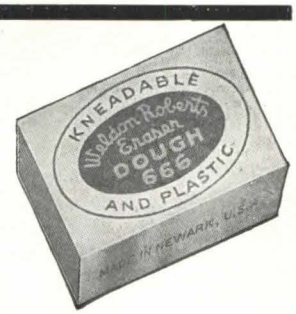
In the "DOUGH"



Rubber that picks up dirt, pencil and charcoal marks.

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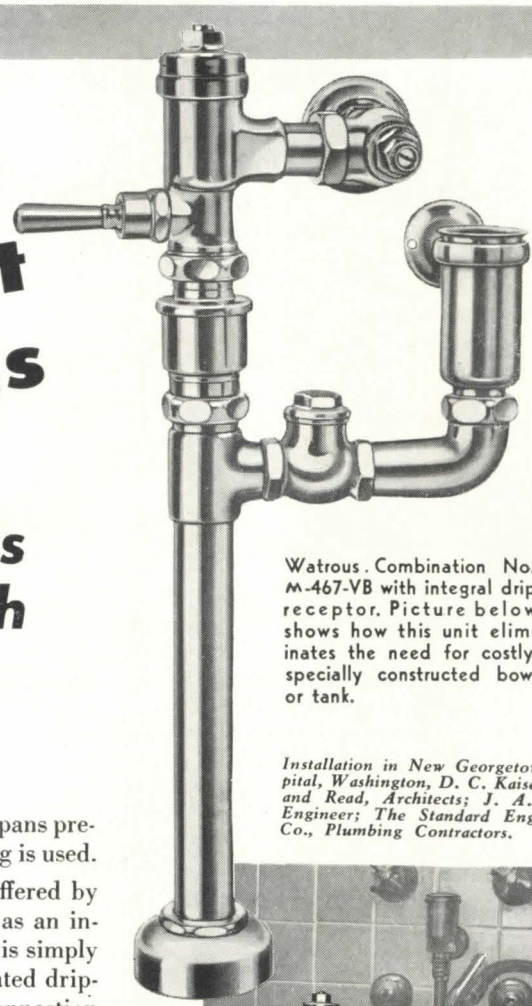
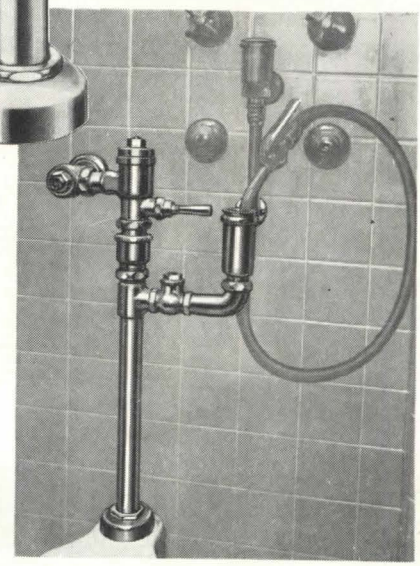


Watrous . Combination No. M-467-VB with integral drip receptor. Picture below shows how this unit eliminates the need for costly, specially constructed bowl or tank.

Installation in New Georgetown Hospital, Washington, D. C. Kaiser, Neal, and Read, Architects; J. A. Murry, Engineer; The Standard Engineering Co., Plumbing Contractors.



In hospitals, the use of special fittings to clean bed pans presents the problem of drippings every time the fitting is used.

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CONTENTS

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Of PROGRESSIVE ARCHITECTURE, published monthly at New York, N. Y., for October 1, 1947.

State of New York }
County of New York } ss.

Before me, a Notary Public, in and for the State and County aforesaid, personally appeared John G. Belcher, who, having been duly sworn according to law, deposes and says that he is the Publishing Director of the Corporation publishing PROGRESSIVE ARCHITECTURE and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933 and July 2, 1946, embodied in section 537, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and publishing director are:

Publisher, Reinhold Publishing Corporation, 330 West 42nd St., New York, N. Y.; Editor, Thomas H. Creighton, 43 Hamilton Pl., Douglaston, N. Y.; Managing Editor, Charles Magruder, 61 West 51st St., New York, N. Y.; Publishing Director, John G. Belcher, Christie Hill Road, Darien, Conn.

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3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner, and this affiant has no reason to believe than any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

JOHN G. BELCHER,
Publishing Director.

Sworn to and subscribed before me this 17th day of September, 1947.
(My commission expires March 30, 1948.)

CURVILLE C. ROBINSON, *Notary Public*

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  ARCHITECTURAL RECORD
  March 1947

- "With each chapter there are many examples illustrated with floor plans, photographs and statistical tables of various types of existing hospital layout.

  "A sound book, well designed."—Eleanor Bittermann

  THE ARCHITECTURAL FORUM
  March 1947

- "The thoroughness of the survey is well brought out in the section of 'Daylighting,' which offers scientific proof that proper daylight not only insures better vision and happier psychological responses, but also sometimes gives 'life or death' protection against cross infection."

  INTERIORS
  March 1947

- ". . . The most important volume to be published to date has been Hospitals—Integrated Design. . . . Here at last is a volume which the hospital field has long been waiting for."—Marshall Shaffer

  PROGRESSIVE ARCHITECTURE
  May 1947

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Delaware Hospital, Wilmington, Delaware

Heated by 6-zone Webster Moderator System of Steam Heating. Completed in 1942. Unit No.1, center, occupied in 1940. Architects: Massena & duPont, Wilmington. Consulting Engineers: Jaros, Baum & Bolles, New York. General Contractor: Turner Construction Co., Philadelphia. Heating Contractor: Benjamin F. Shaw Co., Wilmington.

3 Trap Replacements in 7 Heating Seasons

When a hospital spends in the neighborhood of $30,000 annually for fuel oil, that's big business. It calls for a "controllable" steam heating system and careful heating plant operation to effect maximum economies.

The outstanding heating record of the new Delaware Hospital began with a Webster Moderator System designed by the well known New York engineering firm of Jaros, Baum and Bolles. It included installation by a competent heating contractor.

Continuity of operating experience is provided by Chief Engineer Carl A. Baehr, who has been with the new Delaware Hospital from the beginning. Let Mr. Baehr tell you about some of the heating economies.

"Out of 1,981 Webster Radiator Traps in use, only three have required new thermostatic interiors in seven years of service. The Webster Radiator Supply Valves have been completely satisfactory.

"We receive no more than six legitimate heating complaints a year, and correction is always promptly made.

During fuel rationing we effected a number of operating economies. Stairway radiators were turned off. Radiators in the clinics, X-ray laboratory, solariums and business office were shut down at 4 p.m. and turned on at 8 a.m. This manageability is characteristic of modern steam heating systems.

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Fuel consumption records show that the Hospital did not require a supplementary ration at any time during fuel rationing. The Webster Moderator System saves fuel by keeping radiators comfortably warm. Instead of 212 degrees, the average surface temperature of radiators is 185 degrees, 150 degrees or even as low as 90 degrees, depending on the need for heat.

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WEBSTER
MODERATOR
CONTROL
"Control-by-the-weather"

OBSERVATIONS

THE DEATH OF HOWARD MYERS, publisher of the *Forum*, was a great shock to the profession as a whole, and meant a distinct personal loss to many individual architects. Not only was Howard friend and adviser to many designers; as a professional journalist he was a figure that all of us in *that* profession looked up to and admired.

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I HAVE AT HAND THE REPORT FOR 1947 OF THE NATIONAL ARCHITECTURAL ACCREDITING BOARD. This year the Board visited 16 schools for the purpose of appraising or reappraising. While we all know that the schools are crowded and in need of teachers, the seriousness of the situation is strikingly brought home by statistics regarding 13 of the schools visited. The Board in its report states its belief that the facts are "representative of the changes that have taken place in all of the schools."

In these 13 schools the teaching experience of the teachers has declined since 1939, the salary level has risen somewhat, the size of the faculty has increased by half, but the number of entering and enrolled students has almost *tripled.*

The statistics (1947 compared with 1939) are as follows:

Teaching Budgets	104%	Increase
Average Teachers' Salaries	36%	"
Drafting Space	23%	"
Entering Students	168%	"
Enrolled Students	136%	"
Graduated Students	23%	"
Teachers	47%	"
Teachers' Practice Experience	25%	"
Teachers' Teaching Experience	26%	Decrease

Incidentally, this important Board carries on its work with an inadequate budget, expanding its own membership by drawing on the time and effort of a number of other teachers and practitioners. A three-man team visits each school appraised.

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ST. LOUIS WAS HOST TO A GREAT MANY ARCHITECTS IN THE LATTER PART OF SEPTEMBER. The American Hospital Association held its convention there, and at the same time the jury for the Jefferson National Expansion Memorial competition gathered for its first-stage judgment. I went out there calmly intending to visit several local architects and found more to do in a few days that I ever want to encounter again.

THE A.H.A. PRESENTED A PROGRAM ON HOSPITAL DESIGN which justified the trips many architects had made from all over the country. Only one mistake in planning was made: the all-day architects' meeting was on a Sunday, which is a dry day in St. Louis. The traveling show featuring Skidmore, Owings & Merrill vs. Carl Erikson on the subject of southern orientation and maximum glass areas (former one-night stands in Ann Arbor and Grand Rapids) was as enjoyable as usual, even with Bob Cutler standing in for Nat Owings. A number of us got drawn into the discussion, which proved principally that (a) not enough technical material has been published on the value, the control, and the limitations of sunlight, and (b) what technical data has been published has not been read.

This question of the value to the profession of publishing technical information (of the sort which is more than a report on new products) concerns us on *P.A.* very much. At the Princeton conference in the spring John Burchard had some mean things to say about the architectural journals on this score. He spoke scathingly of the "pseudo-scientific" material which the profession is fed. I don't quite know what he means by that. I do know that not one of the people in St. Louis who were discussing solar orientation had read the factual report (May 1947 PROGRESSIVE ARCHITECTURE) of the research on this subject being conducted at Purdue University. There's not much point in publishing material which isn't going to be read. That does no one except the printer and the paper manufacturer any good. I don't mean to imply that we shall therefore stop publishing factual research data, when it is available. We'll publish it, and make it as readable as possible. Then it's up to you people. We can't read it for you.

The nicest story I got out of the convention was a true one about the architect who was designing a hospital for the first time. The hospital superintendent impressed him with the fact that all facilities must provide for a balanced distribution of sexes. Wards, etc., would be required in equal numbers for men and women. The architect took his lecture seriously, and when plans were completed they indicated two morgues.

THE JEFFERSON MEMORIAL JURY UNDER THE GENIAL GUIDANCE OF GEORGE HOWE worked hard at its task of selecting from the 172 entries five winners to compete for the final stage. No announcement of the five names will be made until the entire competition is completed in February. Of course, rumors are rife, and we've heard our share of them, but we're not allowed to speculate in print.

This particular competition, because of its national importance, has caused much discussion within the profession of various aspects of the competition principle. There is, for instance, the great financial contribution that the designers make toward the success of such a venture. St. Louis citizens put up handsome prizes (a total of $175,000), but the competitors put up at least a thousand dollars each in time and office costs, which makes the total contribution of the profession considerably greater than that of the sponsors.

There has been some discussion of the value of anonymity in such competitions. The jury is composed of honorable, objective men. Why must the names of the competitors be hidden from them? The usual answer is that they might, even subconsciously, be influenced by great names. Our experience in the *P.A.* Awards judgment last year didn't bear this out. Obviously, in judging completed work, some of which members of the jury had seen, some of which had been published, it would have been futile to try to hide the architects' names. Yet two unknown firms won Awards in a field which included a number of internationally known and very able designers.

Another question being kicked around is the influence on the jurors of handsome presentations. It is an obvious fact that a wonderful idea may not receive the attention it deserves if it is presented simply and factually; it may be overshadowed by a mediocre solution, dolled up by means of fancy presentation techniques. Jurors are human, and no matter how hard they try, they can't help but be influenced by such matters. It is my impression, after talking to a number of people who have served on important juries recently, that they are much more apt to be influenced by presentation than by names. We have made great advances in the conduct of competitions, and the "ethics" are well protected by the A.I.A. standards. No important competition could now become the fiasco that the League of Nations business was. Perhaps, in addition to that, some of the basic concepts of the principle of competitive solutions should now be re-examined.

Thomas H. Creighton